V. FINANCIAL MARKETS

The process of deleveraging and dysfunctional financial markets in the advanced economies accentuating a global financial crisis has highlighted the importance of orderly functioning of markets for achieving macroeconomic objectives. In the third quarter of 2008-09, when liquidity dried down in the global money markets and the credit markets almost froze, there were knock-on effects on the domestic money and foreign exchange markets, which prompted the Reserve Bank to initiate measures to ensure adequate provision of both rupee and foreign exchange liquidity in the market. While orderly conditions were restored in the money market by November 2008, the pressure on the exchange rate continued, alongside pressure on the country's balance of payments and draw down of foreign exchange reserves. The equity markets followed the general global sentiments and market trends and after a phase of sharp downward movement, the market has shown some recovery since March 2009. In the government securities market, reflecting the economy's need for large fiscal stimulus, the gross market borrowings of the Government in 2008-09 were substantially higher than that for 2007-08. The entire market borrowing programme was managed smoothly by the Reserve Bank. In the credit market, following significant reduction in policy rates by the Reserve Bank, the lending rates of banks have begun to exhibit some moderation. In the context of the high volatility that was witnessed in global financial markets in 2008-09, one notable aspect of the Indian financial markets was that all segments functioned normally, with occasional volatility for short periods.

V.1 The subprime crisis, that emerged in the US housing mortgage market in the second half of 2007, snowballed into a global financial crisis and a global economic crisis. The global financial landscape changed significantly during the course of 2008-09 wherein several large international financial institutions either failed or were restructured, with the support of very large goverment interventions in many countries, to prevent imminent collapse. The significant deterioration in global financial conditions since mid-September 2008, led to severe disruptions in the short-term funding markets, widening of risk spreads, sharp fall in equity prices and inactivity in the markets for asset-backed securities. Consequently, the strain on the balance sheets of financial institutions increased, threatening the viability of some of the most well known financial entities in the world. The freezing up of credit markets necessitated extraordinary actions on the part of central banks and governments in countries across the world to mitigate the systemic risks posed by the ongoing financial crisis.

V.2 To restore confidence and facilitate orderly functioning of markets, central banks have been responding through both conventional and unconventional measures and there have been instances of coordinated policy actions by the central banks. The conventional measure of monetary easing has been achieved through policy rate cuts which has taken the policy rate to nearly zero as in the case of the US and to an all-time low of 0.5 per cent as in the case of UK and 1.25 per cent in the Euro area. The other measures include lending by central banks to non-banks, large-scale provision of term-funding in local currency and dollar markets and expansion of the range of acceptable collateral for receiving funding from the central bank. Further, steps have been taken to deal with distressed assets and provide liquidity, including through bank recapitalisation.

V.3 The important initiatives taken by the US Federal Reserve, besides reduction of the federal funds rate, include conducting direct purchases of agency debt and agency mortgage-backed securities, broadening of liquidity programmes to financial intermediaries and other central banks and initiating programmes in support of systemically important market segments. The US government entities also undertook extraordinary initiatives to support the financial sector by injecting capital into the banking system and providing guarantees on select liabilities of depository institutions. Many foreign central banks and governments took similar steps. Despite the host of measures taken in most countries, normalcy continues to elude the international financial markets. This has contributed to the continued uncertainty and deterioration of the world economic outlook. The financial markets need to be stabilised in order to achieve a turnaround in global growth conditions.

V.4 Restoring investor confidence is key to achieving financial stability. In this context, there is a paramount need to deal with distressed assets and recapitalise vital institutions. This entails substantial contribution from governments for support of the financial sector. Simultaneously, governments have been addressing the recession through growth stimulus packages, while the tax receipts are likely to reduce in the face of the economic downturn. The longer it takes to effectively implement the support packages for the financial sector, the negative feedback transmitting from the financial sector to the real sector may lead to more protracted recession. The US government and the Federal Reserve have initiated programmes for systemically important segments/institutions of the financial market. The authorities are conducting severe stress tests on all the major banks, and if they are found short of capital required under more severe but plausible scenarios, they could fill the gap by recourse to private financing or through temporary capital buffers made available by the government. The US Treasury, in conjunction with the Federal Deposit Insurance Corporation and the Federal Reserve, has announced the details of a Public-Private Investment Programme which would use US$ 75-100 billion of Troubled Assets Relief Programme (TARP) capital and capital from private investors and seek to generate US$ 500 billion in purchasing power to buy legacy assets, with the potential to expand to US$ 1 trillion over time.

V.5 Due to the inter-linkages in the global financial markets, the ramifications of developments in the advanced economies are felt in the emerging economies. Hence, there needs to be greater coordination and cooperation amongst the policy-making bodies so as to restore trust in the markets. In this regard, the Basel Committee on Banking Supervision and the Financial Stability Forum, to be known as Financial Stability Board in its expanded version, have extended their membership to a number of emerging market economies including India.

V.6 The knock-on effects of the international developments spilled into the Indian financial markets in mid-September 2008. The Reserve Bank, like most central banks, has since taken a number of conventional and unconventional measures to augment the domestic and foreign exchange liquidity and address the supply constraints impacting the growth momentum in the domestic economy. An important distinction between the actions taken by the Reserve Bank and other central banks is that the interaction is still largely through the banking channel and even the measures aimed at addressing the liquidity and redemption needs of mutual funds, non-banking financial companies (NBFCs) and housing finance companies are directed through the banks[1]. Another notable distinction is that there has not been any dilution of the collateral taken by the Reserve Bank. The array of instruments available allow for flexibility in Reserve Bank's operations. Liquidity modulation through flexible use of a combination of instruments, to a significant extent, cushioned the impact of the international financial turbulence on domestic financial markets by absorbing excessive market pressures and ensuring orderly conditions. Thus, liquidity pressures were evident in India for a temporary period in September and October 2008. The Indian financial markets are robust and working normally with no dislocations in the foreign exchange, money and government securities markets.

International Financial Markets

V.7 Since mid-October 2008, the developments in the international financial markets have been largely conditioned by the policy responses to the crisis. The pricing behaviour has begun to mirror the strains of the ongoing economic recession and prices have been decidedly volatile given the environment of heightened uncertainty. Pressure on credit market persists in the wake of recession in many economies and subdued corporate performance, which has given rise to the expectation of possible increase in defaults. During the fourth quarter of 2008-09, the equity valuations generally remained low on account of concerns stemming from the weak financial and economic outlook.

Money Markets

V.8 The policies initiated by central banks and the guarantees offered by governments assuaged to an extent the

[1] The Government of India had announced an arrangement for providing liquidity support to meet the temporary liquidity mismatches for eligible Systemically Important Non-Deposit taking Non-Banking Financial Companies (NBFC-ND-SI) through the Industrial Development Bank of India Stressed Asset Stabilisation Fund Trust, which has been notified as a Special Purpose Vehicle for undertaking this operation.

funding pressures that were evident in the international financial markets during September and October 2008. The spreads between Libor and overnight index swaps (OIS) have been gradually narrowing. In the UK, however, bank funding markets came under renewed pressure. The Sterling Libor-OIS spreads slightly widened and the interbank term-lending remained subdued during late January and February 2009.

V.9 The benchmark credit default swap (CDS) indices have shown significant spread volatility since end-November 2008 up to the fourth quarter of 2008-09. Investment grade spreads, however, mostly performed better than the lower-rated borrowers. For instance, between end-November 2008 and end-February 2009, the US five-year CDX high-yield index spread had risen by 148 basis points, while the investment grade spreads registered a decline of 28 basis points. The same pattern was exhibited by the European CDS indices. As problems persist in the banking sector internationally and recessionary conditions have become widespread, it is expected that default rates will increase. Risk tolerance in the market is low and lower-rated spreads are expected to see increased volatility. In March 2009, the Federal Reserve approved the application of the ICE Trust to become a member of the Federal Reserve system. The ICE trust would provide central counterparty services for CDS contracts conducted by its participants. Under the arrangement, the ICE Trust would work towards reducing the risk associated with the trading and settlement of CDS transactions by assuming counterparty credit risk and enforcing participation standards and margin requirements.

V.10 As spreads continued to be affected by financial market concerns, in January 2009, the authorities in the UK announced a further broad-based package for rescue of the financial institutions in the country. Additional support measures were announced by other European countries as well. However, as concerns mounted over the fiscal implications of the support packages and the depressed risk appetite, spreads on sovereign CDS rose during the first three months of 2009.

V.11 Recent measures taken by the governments and central banks do seem to be having a favourable impact on certain segments of the money and credit markets, which had faced severe disruptions during the acute phase of the crisis in the third quarter of 2008-09. For instance, the US government's announcement in November 2008 and the subsequent initiation of a programme for purchase of up to US$ 100 billion of direct obligations of housing-related government-sponsored enterprises and up to US$ 500 billion of mortgage-backed securities (MBS) backed by Fannie Mae, Freddie Mac, and Ginnie Mae has helped in reducing spreads on agency debt and the conditions for high-quality borrowers in the primary residential mortgage market recovered to an extent. In March 2009, the Federal Open Market Committee also announced plans to purchase an additional US$ 750 billion of agency MBS and invest an additional US$ 100 billion in agency debt. The Committee also announced that it would buy up to US$ 300 billion of longer-term Treasury securities over the next six months to help improve conditions in private credit markets.

V.12 The Federal Reserve launched the Term-Asset Backed Securities Loan Facility (TALF) on March 3, 2009 in an attempt to unfreeze markets for securities backed by loans. Spreads in the areas where the programme is focussed – pooled credit card, auto, student and small business loans – narrowed during the first two months of 2009 in anticipation of TALF and narrowed considerably in March with the launch of the programme. The first tranche of funding under TALF was settled on March 25, 2009.

V.13 The banking sector in the US and Europe continued to show further signs of problems, despite the massive injection of capital by the government and from private sources since late 2007. Notable instances of governments picking up or hiking their stakes in financial entities during the fourth quarter of 2008-09 include the German government taking a 25 per cent stake in the merged entity of Commerzbank and Dresdner Bank, the US authorities' investment of US $ 20 billion in Bank of America through a preferred equity stake and the UK government restructuring its investment in the Royal Bank of Scotland. The UK authorities continued to announce a series of measures during the fourth quarter of 2008-09 for enabling sufficient credit flow to households and businesses. These measures include capping the losses on banks' holdings of risky assets, state guarantees to facilitate bank funding and purchase of commercial paper, corporate bonds and other securities to enhance credit availability in the economy. In March 2009, the Bank of England embarked upon a policy of credit/quantitative easing entailing the purchase of £ 75 billion worth of conventional gilts and notified private sector assets in the secondary market, in a bid to support the flow of corporate credit. The UK programme has resulted in significantly lower yields for the gilts, which the Bank has agreed to buy. Corporate bond yields have also fallen. By the first week of April 2009, £ 26 billion of asset purchases had been made and it is expected that the programme will be completed in another two months. In April 2009, the Bank of Japan announced that it would offer credit-worthy commercial banks subordinated loans worth up to ¥1 trillion to smoothen financial intermediation in the country. The programme is likely to commence in May 2009.

Short-term Interest Rates

V.14 The easing of short-term interest rates in advanced economies persisted in the fourth quarter of 2008-09, as policy rates continued to be cut with inflation concerns disappearing and the recession in most advanced economies turning out to be deeper and more protracted than was earlier estimated (Table 41). The US federal funds rate remains in the range of 0.0-0.25 per cent set in mid-December 2008. The Bank of England effected a 50 basis point cut in policy rates in each of

Table 41: Short-term Interest Rates

(Per cent)

Region/Country	End of					
	March 2007	March 2008	June 2008	Sept 2008	Dec 2008	March 2009
1	2	3	4	5	6	7
Advanced Economies						
Euro Area	3.91	4.72	4.96	5.07	2.97	1.50
Japan	0.57	0.75	0.75	0.75	0.62	0.54
UK	5.55	6.01	5.93	6.25	2.73	1.70
US	5.23	2.26	2.29	2.04	0.44	0.50
Emerging Market Economies						
Argentina	9.63	10.44	16.50	13.81	19.56	14.44
Brazil	12.68	11.18	12.17	13.66	13.66	11.16
China	2.86	4.50	4.48	4.31	1.86	1.22
Hong Kong	4.17	1.83	2.33	3.66	1.00	0.90
India	**7.98**	**7.23**	**8.73**	**8.56**	**5.04**	**4.95**
Malaysia	3.64	3.62	3.69	3.70	3.40	2.09
Philippines	5.31	6.44	6.00	4.00	5.25	4.50
Singapore	3.00	1.38	1.25	1.75	0.91	0.56
South Korea	4.94	5.32	5.36	5.78	3.98	2.41
Thailand	4.45	3.25	3.65	3.85	3.85	1.80

Note : Data for India refer to 91-day Treasury Bills rate and for other countries 3-month money market rates.
Source : The Economist.

the three months of the fourth quarter of 2008-09. As of March 5, 2009, the official bank rate was at an all-time low of 0.5 per cent. The ECB has reduced its policy rates by 300 basis points since October 2008, the rate for main refinancing operations thus stands reduced to 1.25 per cent. The softening of interest rates was broad-based and across the spectrum, as emerging economies also saw frequent cuts in policy rates and liquidity injections by the authorities. Countries that effected cuts in policy rates during the fourth quarter of 2008-09 include Turkey (cumulative reduction of 725 basis points since October 2008), South Africa (cumulative reduction of 250 basis points since October 2008) and South Korea (cumulative reduction of 300 basis points since October 2008). The policy rate cuts by the Czech Republic, Peru, Sri Lanka, Chile, Egypt, Canada, Poland, Malaysia, New Zealand, Iceland and Brazil, during the fourth quarter of 2008-09, ranged from 50 basis points to 600 basis points.

Government Bond Yields

V.15 There has been much volatility in the government bond yields because even as most advanced economies are facing a recession, concerns have mounted over the increased borrowing requirements of the governments. This contributed to the increase in the 10-year government bond yields in some advanced countries during the fourth quarter of 2008-09. The 10-year government bond yield in the US increased by 72 basis points between December 29, 2008 and April 8, 2009. During the same period, yields on 10-year government papers increased by 34 basis points in the Euro area, 20 basis points in Japan and 15 basis points in the UK (Chart 21).

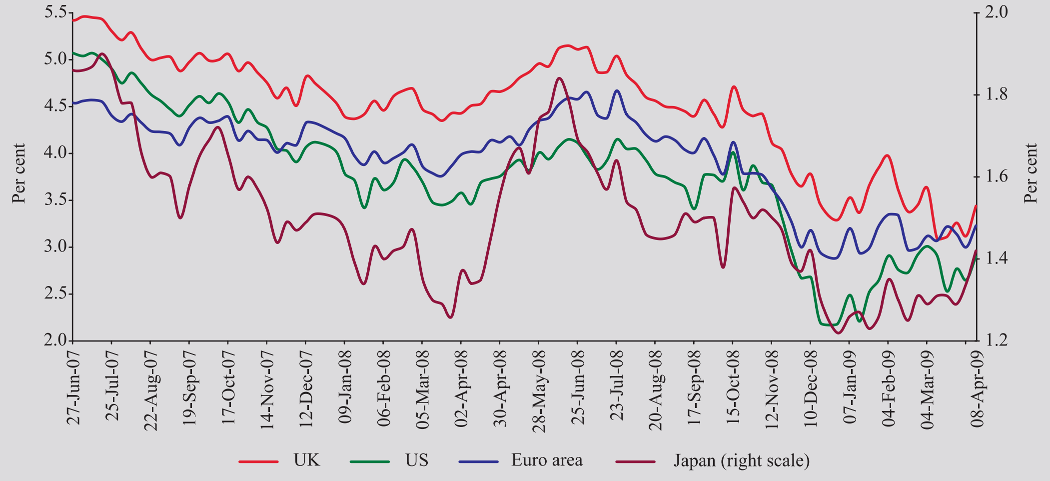
Foreign Exchange Markets

V.16 The international financial markets witnessed extreme dislocations in the period immediately following the collapse of the Lehman Brothers in mid-September 2008. The volatility in the markets, which peaked by end-2008, moderated somewhat in 2009. Due to the unwinding of carry trade positions and low risk appetite, the yen appreciated against most other currencies, including the US dollar during 2008-09. However, beginning mid-February 2009 up to mid-April 2009, the yen has generally depreciated against the US dollar.

V.17 Although, the foreign exchange swap spreads have begun to soften, the foreign exchange markets remained strained for most countries during the first quarter of 2009. The Bank of Mexico had to directly intervene in the foreign-exchange markets for the first time in more than a decade in February 2009 because of the severity of the impact of the crisis on its currency trading. Four eastern European central banks (of Romania, Hungary, Poland and the Czech Republic) announced that they would make coordinated effort to bolster their currencies as the sharp depreciations experienced by their respective currencies were not in line with the economic fundamentals.

V.18 The US dollar, generally, appreciated against most of the currencies

Chart 21: 10-year Government Bond Yields



as the US investors were liquidating their positions in overseas equity and bond markets and repatriating the money back to the US. Notwithstanding the deepening of the financial crisis and weakness in economic activity in the US, the flight to safety considerations helped strengthen the US dollar. During 2008-09, the US dollar appreciated against most major currencies including the euro and the pound sterling. The US dollar, however, depreciated against the Japanese yen, as a result of unwinding of carry trades. Amongst Asian currencies also, the US dollar appreciated against Korean won, Thai baht, Malaysian ringgit, Indonesian rupiah and Indian rupee but depreciated against Chinese yuan. As on April 14, 2009, however, the US dollar depreciated against most major currencies, except the euro and the Japanese yen, over end-March 2009 levels (Table 42).

Table 42: Appreciation (+)/ Depreciation (-) of the US dollar *vis-à-vis* other Currencies

(Per cent)

Currency	End-March 2008 @	End-March 2009 @	April 14, 2009*
1	2	3	4
Euro	-15.77	18.82	0.24
Pound Sterling	-1.53	38.67	-3.78
Japanese Yen	-14.92	-2.00	1.78
Chinese Yuan	-9.34	-2.61	-0.09
Russian Ruble	-9.68	44.25	-1.52
Turkish Lira	-5.75	27.69	-6.03
Indian Rupee	-8.30	27.47	-2.15
Indonesian Rupiah	1.09	25.58	-5.13
Malaysian Ringgit	-7.77	14.42	-1.41
South Korean Won	5.47	38.86	-3.26
Thai Baht	-10.16	12.85	-0.24
Argentine Peso	2.08	17.32	-0.84
Brazilian Real	-16.99	31.20	-3.02
Mexican Peso	-3.48	32.90	-7.53
South African Rand	11.34	17.22	-4.95

@ : Year-on-year variation.
* : Variation over end-March 2009.

Equity Markets

V.19 The year 2008-09 continued to be a dismal year for the stock markets. As a reflection of the economic and financial market outlook, the year was characterised by depressed equity valuations. Equity price indices in most advanced economies were relatively flat during July and August 2008, but caught on the downward spiral subsequently, which continued into the first two months of 2009 (Table 43).

V.20 Consequently, price/earnings ratios in most markets across the world followed a downward trend. They remained at or close to all-time low levels for most regions during the fourth quarter of 2008-09. Though the decline in equity valuations was broad-based across all sectors, financial institutions, particularly in Japan, were the worst sufferers. The volatility in the markets in the fourth quarter was compounded by the lack of detailed information about government rescue packages. The equity markets saw a slight recovery in most countries/regions since mid-March 2009, helped further by the US government announcing the details of the public-private investment programme aimed at repairing balance sheets of financial institutions.

Emerging Markets

V.21 The ongoing crisis has invalidated the ‘decoupling hypothesis’, as emerging economies too have been hit by the crisis.

Table 43: International Stock Markets

Country/Index	Percentage Variation (year-on-year)		
	End-March 2007	End-March 2008	End-March 2009
1	2	3	4
Developed Markets			
US (Dow Jones)	11.2	-0.7	-38.0
US (NASDAQ)	3.5	-5.9	-32.9
FTSE UK 100	5.8	-9.6	-31.2
Euro area (FTSE 100)	7.5	-15.7	-40.1
Japan (Nikkei 225)	1.3	-27.6	-35.3
Hong Kong (Hang Seng)	25.3	15.4	-40.6
Emerging Markets			
Russia	34.9	6.1	-66.4
Brazil	20.7	33.1	-32.9
Colombia	-3.7	-16.0	-10.6
South Africa	34.3	11.5	-32.7
South Korea	6.8	17.3	-29.2
Hungary	1.6	-7.3	-49.0
Singapore	28.2	-4.9	-43.5
Malaysia	34.6	0.1	-30.1
Argentina	16.8	0.0	-46.5
Turkey	1.8	-10.6	-34.0
Indonesia	38.4	33.7	-41.4
India	**15.9**	**19.7**	**-37.9**
Thailand	-8.1	21.3	-47.2
China	145.2	9.1	-31.7
Memo:			
World (MSCI)	13.4	-5.1	-44.0
EMEs (MSCI)	17.9	18.9	-48.4

Source : Bloomberg.

Even though institutions in most of the emerging economies did not have direct exposure to the toxic assets, these economies are suffering the consequences of the economic recession that has gripped the advanced economies. The emerging market economies witnessed capital flow reversals, sharp widening of spreads on sovereign and corporate debt and abrupt currency depreciations during 2008-09. Banks have curtailed their lending to emerging economies as reflected in the near halving of the total volume of international syndicated loan facilities given to borrowers in emerging markets in the last quarter of 2008 as against the corresponding period of the previous year.

V.22 The central and east European economies seem to have suffered the brunt of the global financial markets upheaval, given their large current account deficits. Banks in most of these countries are in need of government support in the form of recapitalisation. Several emerging eastern European countries, including Hungary, Romania and Ukraine, have sought IMF support to stabilise their financial markets. The emerging economies of Europe which saw plummeting valuations in equity markets include the Czech Republic, Hungary, Poland and Russia. During the fourth quarter of 2008-09, the foreign exchange markets of most emerging market economies continued to be under pressure. The Russian rouble continued the downward spiral against both the US dollar and the euro, with the plunge being particularly persistent during the fourth quarter of 2008-09. Some other currencies that suffered sharp losses during the period include the Czech koruna, the Hungarian forint, the Polish zloty, the Brazilian real, the Korean won, the Mexican peso and the Indonesian rupiah. Ten ASEAN members and China, Japan and Korea have together pledged US$ 120 billion to counter the risk of a currency collapse in the region by enhancing the total size of the multilateralised Chiang Mai Initiative.

Sovereign credit spreads in select emerging market economies showed improvement over the levels that were seen in October 2008. However, for most low-rated Latin American and Eastern European issuers, the spreads continued to be at record highs.

V.23 Though emerging market economies, including India, do not have direct or significant exposure to stressed financial instruments or troubled financial institutions, they are not immune to the adverse effects of the financial crisis. During the fourth quarter of 2008-09, a number of countries announced further measures for monetary easing, provision of liquidity and restructuring/ recapitalisation of the financial system (Table 44).

Table 44: Recent Global Response to Financial Market Turmoil

Country	Key Measures
1	2
United States	**Monetary Policy Easing** • The target range for federal funds rate was set between 0.00 and 0.25 per cent on December 16, 2008 and has remained unchanged since then. **Liquidity Provision** • Term funds continued to be auctioned through new channels such as the Term Auction Facility (TAF). • The set of eligible collateral for loans extended by the Term Asset-Backed Securities Loan Facility (TALF) was expanded to include four additional categories of asset-backed securities. • Five liquidity facilities – the Primary Dealer Credit Facility (PDCF), the Asset-Backed Commercial Paper Money Market Mutual Fund Liquidity Facility (AMLF), the Commercial Paper Funding Facility (CPFF), the Money Market Investor Funding Facility (MMIFF) and the Term Securities Lending Facility (TSLF) – were extended up to October 30, 2009. • The Temporary Money Market Funds Guarantee Program extended up to September 18, 2009. • The set of institutions eligible to participate in the MMIFF was expanded. Several economic parameters of the MMIFF were adjusted so that it remained a viable source of back-up liquidity for money market investors even at very low levels of money market interest rates. • The Federal Reserve to purchase US$ 1.25 trillion of agency mortgage-backed securities and US$ 200 billion of agency debt in 2009. • The Federal Reserve to purchase US$ 300 billion of longer-term Treasury securities by September 2009. • A Public-Private Investment Programme to generate purchasing power of up to US$ 1 trillion to buy legacy assets. **Recapitalisation of the Financial System** • Restructuring of Government's financial support to the American International Group (AIG) was announced in March 2009. • The US government entered into an agreement with Bank of America to provide a package of guarantees, liquidity access and capital. • The US Treasury to participate in Citigroup's exchange offering by converting a portion of its preferred security to common equity alongside the other preferred holders. • Community Development Financial Institutions (CDFI) Fund announced to award nearly US$ 100 million in grants and US$ 3 billion in additional tax credit authority to support community-based financial institutions such as loan funds, credit unions, banks, venture capital firms and other financing entities. • Total Capital Purchase Program (CPP) investment of US$ 195.3 billion in 359 institutions since October 2008. • Capital Assistance Programme announced for the major US banking institutions.

(Contd...)

Table 44: Recent Global Response to Financial Market Turmoil *(Concld.)*

Country	Key Measures
1	2
	Other Measures
	• A policy announced to help avoid preventable foreclosures on certain residential mortgage assets held, owned or controlled by a Federal Reserve Bank.
	• Application of the ICE trust to provide central counterparty services for certain CDS contracts was approved.
United Kingdom	**Monetary Policy Easing**
	• Official bank rate was cut thrice by 50 basis points (bps) each during January-March, 2009 to 0.5 per cent.
	Liquidity Provision
	• Asset Purchase Facility to buy gilts, commercial paper and corporate bonds from the secondary market using central bank reserves amounting to £ 75 billion.
	• Extension of the drawdown window of the Credit Guarantee Scheme (CGS) up to December 31, 2009.
	• Extension of the term of the Bank of England's permanent discount window facility to 364 days for an additional fee of 25 bps.
	Financial Restructuring
	• The UK Treasury's preference share investment in RBS was converted to ordinary shares.
	Recapitalisation of the Financial System
	• Asset Protection Scheme, which aims to remove uncertainty about the value of banks' past investments, clean up banks' balance sheets and enable them to rebuild and restructure their operations and increase lending in the economy. The scheme is available for a fee on eligible assets of select participating institutions. Agreement signed with Lloyds Banking Group and Royal Bank of Scotland.
	Other Measures
	• The Banking Act 2009, which strengthens the UK's statutory framework for financial stability and depositor protection, was enacted.
Other Countries	**Monetary Policy Easing**
	• ECB cut its interest rates on the main refinancing operations by 50 bps each in January and March 2009 and by 25 bps in April 2009 to 1.25 per cent, on the marginal lending facility by 50 bps in March 2009 and by 25 bps in April 2009 to 2.25 per cent and on deposit facility by 100 bps in January, 50 bps in March 2009 and 25 bps in April 2009 to 0.25 per cent.
	• Central Bank of the Republic of Turkey cut its overnight borrowing rate by 450 bps during January-March 2009.
	• South Korea reduced its monetary policy base rate by 50 bps each in January and February 2009 to 2.0 per cent as on February 12, 2009.
	Liquidity Provision
	• Japan issued fresh guidelines on eligible collateral for credit extended by banks.
	• Bank of Japan announced terms and conditions for the outright purchase of corporate financing instruments such as CP and corporate bonds.
	• The frequency and duration of special funds supplying operations were increased. Most other provisions taken for achieving financial stability, that were set to expire in April 2009, were extended up to at least September 2009.
	Recapitalisation of the Financial System
	• Germany extended a bailout package to Commerzbank to backstop losses at newly acquired Dresdner Bank and took a 25 per cent holding in the combined entity.
	• Ireland took control of the Anglo Irish Bank.
	• The Dutch authorities granted ING Group a backup facility guaranteeing part of the bank's securitised mortgage portfolio worth US$ 35 billion.
	Other Measures
	• To address continued pressures in global US dollar funding markets, the temporary reciprocal currency arrangements (swap lines) between the Federal Reserve and other central banks were extended till October 30, 2009.

Source : Websites of respective central banks, finance ministries.

Domestic Financial Markets

V.24 Beginning mid-September 2008, the Indian financial markets came under pressure owing to the knock-on effects of the global crisis through the monetary, financial, real and confidence channels. The contagion was initially felt in the equity markets due to the reversal of foreign institutional portfolio flows. With sharp tightening of global liquidity, Indian banks and corporates saw their overseas financing drying up. As a means of substitute financing, corporates withdrew their investments from domestic money market mutual funds, thereby putting redemption pressure on them and on NBFCs where the mutual funds had invested a significant portion of their funds. This substitution of overseas financing by domestic financing brought both money market and credit market under pressure. Moreover, the foreign exchange market was impacted by the reversal of capital flows as part of the global deleveraging process. Simultaneously, corporates were converting the funds raised locally into foreign currency to meet their external obligations. Both these factors put downward pressure on the rupee. Furthermore, the Reserve Bank's intervention in the foreign exchange market to manage the volatility in the rupee temporarily tightened the money market.

V.25 In response, the Reserve Bank initiated several measures since September 16, 2008 to augment domestic and foreign exchange liquidity for proper functioning of the domestic markets and maintaining financial stability (Annex 2). Reflecting the impact of the measures, call rates in the money market have settled back into the informal LAF corridor since November 2008, having breached the upper bound in the preceding two months (Table 45). In the foreign exchange market, the Indian rupee generally depreciated against major currencies. In the credit market, the lending rates of scheduled commercial banks (SCBs) have begun to exhibit some moderation since November 2008. The government securities market was bearish for most of the fourth quarter of 2008-09 and yields hardened. Indian equity markets, picking up global cues, staged some recovery in March 2009.

Liquidity Conditions

V.26 The Reserve Bank's monetary policy response to the global crisis impinging on India was to keep the domestic money and credit markets functioning normally and ensure that the liquidity stress did not trigger solvency issues. The need to maintain a comfortable rupee liquidity position, to augment foreign exchange liquidity and to ensure credit delivery to all productive sectors of the economy marked a reversal of Reserve Bank's policy stance from monetary tightening in the first half of 2008-09 to monetary easing in the second half. The measures to meet the above objectives came in several policy packages starting mid-September 2008.

Table 45: Domestic Financial Markets at a Glance

Year/ Month	Call Money		Government Securities		Foreign Exchange			Liquidity Management		Equity			
	Average Daily Turnover (Rs. crore)	Average Call Rates* (Per cent)	Average Turnover in Govt. Securities+ (Rs. crore)	Average 10-Year Yield@ (Per cent)	Average Daily Inter-bank Turnover (US $ million)	Average Exchange Rate (Rs. per US $)	RBI's Net Foreign Currency Sales (-)/ Purchases (+) (US $ million)	Average MSS Out-standing# (Rs. crore)	Average Daily Reverse Repo (LAF) Out-standing (Rs. crore)	Average Daily BSE Turnover (Rs. crore)	Average Daily NSE Turnover (Rs. crore)	Average BSE Sensex**	Average S&P CNX Nifty**
1	2	3	4	5	6	7	8	9	10	11	12	13	14
2006-07	**21,725**	**7.22**	**4,863**	**7.78**	**18,540**	**45.28**	**26,824 ##**	**37,698**	**21,973**	**3,866**	**7,812**	**12,277**	**3,572**
2007-08	**21,393**	**6.07**	**8,104**	**7.91**	**34,044**	**40.24**	**78,203 ##**	**1,28,684**	**4,677**	**6,275**	**14,148**	**16,569**	**4,897**
2008-09 P	**22,436**	**7.06**	**7,175**	**7.56**	**–**	**45.92**	**–**	**1,48,889**	**2,885**	**4,498**	**11,212**	**12,366**	**3,731**
Apr 2008	19,516	6.11	6,657	8.10	37,580	40.02	4,325	1,70,726	26,359	5,773	13,561	16,291	4,902
May 2008	19,481	6.62	6,780	8.04	32,287	42.13	148	1,75,565	11,841	6,084	13,896	16,946	5,029
Jun 2008	21,707	7.75	6,835	8.43	38,330	42.82	-5,229	1,74,433	-8,622	5,410	12,592	14,997	4,464
Jul 2008	24,736	8.76	5,474	9.18	37,173	42.84	-6,320	1,72,169	-27,961	5,388	12,862	13,716	4,125
Aug 2008	23,408	9.1	7,498	9.06	38,388	42.94	1,210	1,71,944	-22,560	4,996	11,713	14,722	4,417
Sep 2008	23,379	10.52	10,418	8.45	44,700	45.56	-3,784	1,75,666	-42,591	5,147	12,489	13,943	4,207
Oct 2008	28,995	9.9	4,321	7.85	36,999	48.66	-18,666	1,69,123	-45,612	3,911	10,810	10,550	3,210
Nov 2008	21,812	7.57	5,866	7.41	31,322	49.00	-3,101	1,47,648	-8,017	3,539	9,618	9,454	2,835
Dec.2008	21,641	5.92	11,451	5.88	34,874	48.63	-318	1,24,848	22,294	3,851	95,928	9,514	2,896
Jan 2009	18,496	4.18	9,568	5.84	27,171P	48.83	-29	1,13,535	45,474	3,526	9,559	9,350	2,854
Feb 2009	22,241	4.16	5,916	5.98	24,840P	49.26	230	1,02,934	50,649	2,856	7,887	9,188	2,819
March 2009P	23,818	4.17	5,322	6.56	–	51.23	–	88,077	33,360	3,488	10,140	8,995	2,802

* : Average of daily weighted call money borrowing rates.
@ : Average of daily closing rates.
** : Average of daily closing indices.
LAF : Liquidity Adjustment Facility.
MSS : Market Stabilisation Scheme.
P : Provisional
\+ : Average of daily outright turnover in Central Government dated securities.
\# : Average of weekly outstanding MSS.
\## : Cumulative for the financial year.
BSE : Bombay Stock Exchange Limited
NSE : National Stock Exchange of India Limited .
– : Not available.
Note : In column 10, (-) indicates injection of liquidity, while (+) indicates absorption of liquidity.

Cash Management of the Central Government

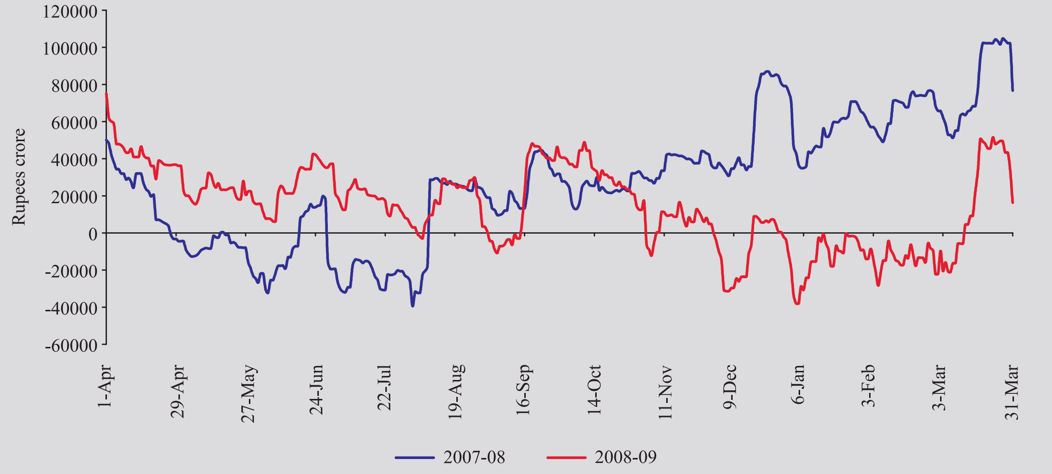
V.27 The surplus cash balance of Rs.76,686 crore as at end-March 2008 was used up by the Central Government to meet its expenditure needs and it resorted to ways and means advances (WMA) during August 4-6, 2008 and again during September 2-14, 2008. During the third quarter of 2008-09, the Government announced fiscal stimulus packages even as revenue receipts decelerated. The Central Government was in WMA for 23 days and resorted to overdraft (OD) for 10 days during the third quarter. The Central Government was in WMA for 70 days and in OD for 55 days during the fourth quarter of 2008-09 (Table 46 and Chart 22).

Table 46: Cash Management of the Central Government

	2007-08	2008-09
1	2	3
Total Number of Days		
WMA	91	109
OD	37	65
Cash Deficit	91	109
Average Daily Utilisation*		
WMA	3,615	2,077
OD	647	1,823

* : in Rupees crore.

Chart 22: Cash Balances of the Central Government



Liquidity Management

V.28 During the financial year 2008-09, liquidity management operations had to change course beginning mid-September 2008 as the knock-on effects of the severe disruptions in international financial markets began to be felt in the domestic financial markets. The use of liquidity management tools such as the cash reserve ratio (CRR) and the Open Market Operation (OMO), including the Market Stabilisation Scheme (MSS) and the Liquidity Adjustment Facility (LAF), was thus modulated in accordance with the evolving conditions in financial markets. Variations in the cash balances of the Central Government and the capital flows and the concomitant foreign exchange operations of the Reserve Bank continued to be the key drivers of liquidity conditions during the year (Table 47).

V.29 There was a reduction in the generation of domestic liquidity during the period from April to mid-September 2008, as the drying up of capital inflows had brought a turnaround in the foreign exchange operations of the Reserve Bank from net spot purchases up to May 2008 to net spot sales thereafter, barring August 2008 (refer Table 47). Consequently, the MSS auctions of dated securities were kept in abeyance after end-April 2008 and MSS issuances, even through Treasury Bills, were stopped after September 2, 2008 (Chart 23). Reflecting the impact of these developments, the LAF turned from absorption mode to injection mode after the first week of June 2008.

V.30 Beginning mid-September 2008, the severe disruptions in international financial markets brought pressures on the domestic money and foreign exchange markets in conjunction with transient local factors such as advance tax payments. In order to alleviate these stresses and with the abatement of inflationary pressures, the Reserve Bank augmented rupee liquidity through a series of measures

Table 47: Reserve Bank's Liquidity Management Operations

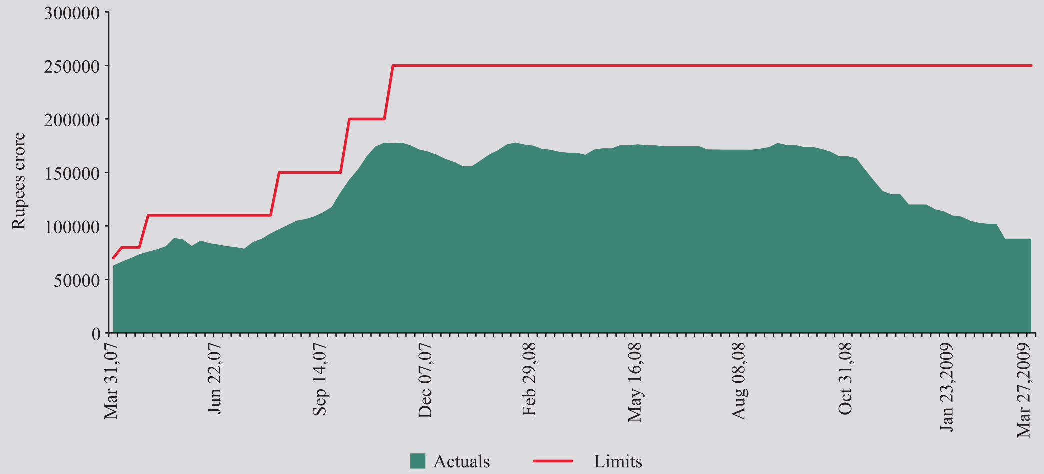
(Rupees crore)

Item	2007-08 (April-March	2008-09 (April-February)	2008-09 Q1	Q2	Q3	Jan	Feb
1	2	3	4	5	6	7	8
A. Drivers of Liquidity (1+2+3+4+5)	**2,03,121**	**-1,24,579**	**6,061**	**-18,917**	**-1,01,304**	**-12**	**-10,408**
1. RBI's net purchases from Authorised Dealers	3,12,054	-1,60,765	-8,555	-40,249	-1,12,168	-129	336
2. Currency with the Public	-85,475	-82,369	-30,071	12,294	-40,096	-7,724	-16,771
3. Surplus cash balances of the Centre with the Reserve Bank	-26,594	76,586	40,073	-3,845	36,554	3,804	0
4. WMA and OD	0	9,603	0	0	0	9,166	437
5. Others (residual)	3,136	32,366	4,615	12,884	14,406	-5,129	5,590
B. Management of Liquidity (6+7+8+9)	**-1,17,743**	**1,06,952**	**-37,659**	**7,217**	**1,33,325**	**-3,516**	**7,586**
6. Liquidity impact of LAF Repos	21,165	-1,10,170	-18,260	24,390	-71,110	-39,975	-5,215
7. Liquidity impact of OMO (Net) *	13,510	48,472	14,642	11,949	10,681	5,173	6,028
8. Liquidity impact of MSS	-1,05,418	66,400	-6,041	628	53,754	11,286	6,773
9. First round liquidity impact due to CRR change	-47,000	1,02,250	-28,000	-29,750	1,40,000	20,000	0
C. Bank Reserves (A+B) #	**85,378**	**-17,627**	**-31,598**	**-11,700**	**32,021**	**-3,528**	**-2,822**

(+) : Indicates injection of liquidity into the banking system.
(-) : Indicates absorption of liquidity from the banking system.
: Includes vault cash with banks and adjusted for first round liquidity impact due to CRR change.
* : Includes oil bonds but excludes purchases of Government securities on behalf of State Governments.
Note : Data pertain to March 31 and last Friday for all other months.

including reduction in CRR by a cumulative 400 basis points to 5.0 per cent and a slew of special facilities (refer Annex 2). Furthermore, the repo rate and the reverse repo rate under LAF were progressively reduced from 9.0 per cent

Chart 23: Market Stabilisation Scheme



to 5.0 per cent and 6.0 per cent to 3.5 per cent, respectively. These apart, MSS buyback auctions were started from November 6, 2008, largely dovetailed with the Government's normal market borrowing programme to provide another avenue for injecting liquidity (Table 48 and Chart 24). Reflecting the impact of these measures, the average daily net outstanding liquidity injection under LAF, which had increased to around Rs.43,000-46,000 crore during September and October 2008, declined sharply thereafter and turned into net absorption from early December 2008.

Table 48: Liquidity Management

(Rupees crore)

Outstanding as on Last Friday	LAF	MSS	Centre's Surplus with the RBI @	Total (2 to 4)
1	2	3	4	5
2008				
January	985	1,66,739	70,657	2,38,381
February	8,085	1,75,089	68,538	2,51,712
March*	-50,350	1,68,392	76,586	1,94,628
April	32,765	1,72,444	36,549	2,41,758
May	-9,600	1,75,362	17,102	1,82,864
June	-32,090	1,74,433	36,513	1,78,856
July	-43,260	1,71,327	15,043	1,43,110
August	-7,600	1,73,658	17,393	1,83,451
September	-56,480	1,73,804	40,358	1,57,682
October	-73,590	1,65,187	14,383	1,05,980
November	-9,880	1,32,531	7,981	1,30,632
December	14,630	1,20,050	3,804	1,38,484
2009				
January	54,605	1,08,764	-9,166	1,54,203
February	59,820	1,01,991	-9,603	1,52,208
March*	1,485	88,077	16,219	1,05,781
April 10	1,29,810	71,145	-13,779	1,87,176

@ : Excludes minimum cash balances with the Reserve Bank in case of surplus.

* : Data pertain to March 31.

Note : 1. Negative sign in column 2 indicates injection of liquidity through LAF.

2. The Second LAF that was discontinued from August 6, 2007 was re-introduced from August 1, 2008 on reporting Fridays and from September 17, 2008 on a daily basis.

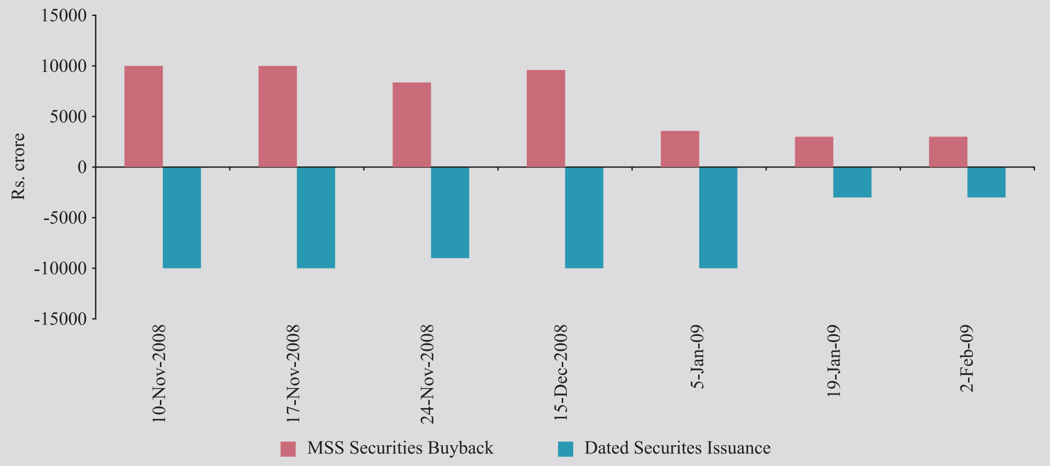
3. Negative sign in column 4 indicates injection of liquidity through WMA/OD.

V.31 For more effective liquidity management and to ensure that the market borrowing programme of the Government was conducted in a non-disruptive manner, the scope of the OMO was widened with effect from February 19, 2009 by including purchases of government securities through an auction-based mechanism in addition to purchases through the Negotiated Dealing System – Order Matching (NDS-OM) segment. The cut-off yields in the OMO purchase auctions were based on the attractiveness of offers for securities relative to their secondary market yields. Auction-based purchases aggregated Rs.5,000 crore whereas purchases through NDS-OM aggregated Rs.800 crore during February 2009.

V.32 With the change in the external accounts in the recent period resulting in attendant draining of primary liquidity reflecting the impact of the Reserve Bank's operations in the foreign exchange market, the Memorandum of Understanding (MoU) on the MSS was amended on February 26, 2009 to permit the transfer of the sterilised liquidity from the MSS cash account to the normal cash account of the Government (details covered in the Central Government securities section later in the Chapter).

V.33 In March 2009, the OMO purchases through auctions and NDS-OM

Chart 24: MSS Buyback and Issuance of Central Government Securities



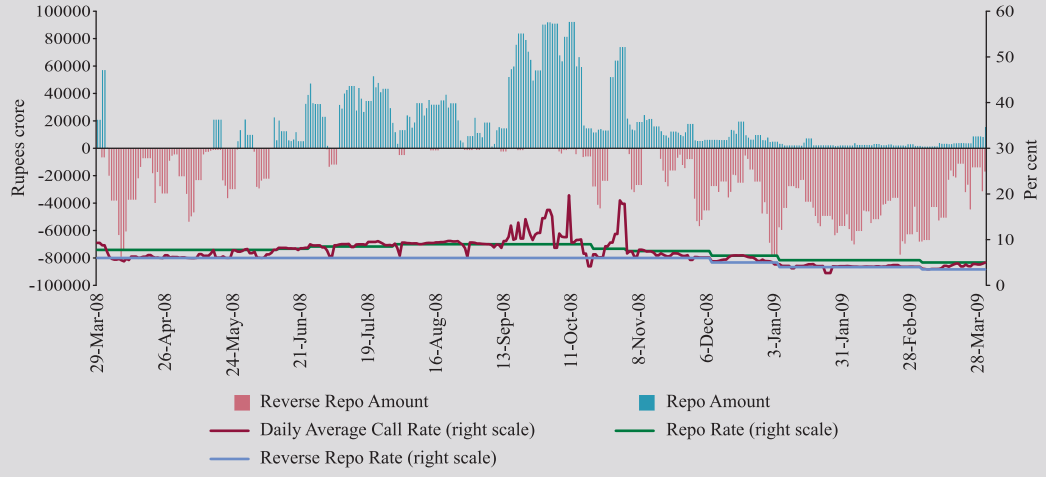
were placed at Rs.41,640 crore and Rs.4,475 crore, respectively, whereas MSS redemptions amounted to Rs.2,000 crore (over and above the de-sequestering of Rs.12,000 crore of MSS balances); these helped to further ease liquidity conditions. The average daily net outstanding liquidity absorption through LAF, however, declined to around Rs.33,000 crore in March 2009 from over Rs.50,000 crore in the previous month, reflecting, *inter-alia*, advance tax outflows. It is, however, noteworthy that the net injection of liquidity through LAF did not occur even on a single day of March 2009, including the last day of the month, in sharp contrast to the experience in the previous few years.

Money Market

V.34 During the first half of 2008-09 (up to mid-September 2008), reflecting the orderly conditions in the money market, the call rates remained largely within the informal corridor of the reverse repo and repo rates. The failure of Lehman Brothers and a few other global financial institutions in September 2008 saw the abrupt freezing of money market activities in the major financial centres. In order to contain the excess volatility in the foreign exchange market, the Reserve Bank made available substantial dollar liquidity. This had a tightening impact on rupee liquidity. The impact was magnified on account of domestic factors such as advance tax outflows from the banking system. The call rate moved above the repo rate in mid-September 2008 (Chart 25). As the series of measures initiated by the Reserve Bank to augment liquidity began to take effect, the weighted average call money rate declined and mostly remained within the LAF corridor from November 3, 2008 onwards.

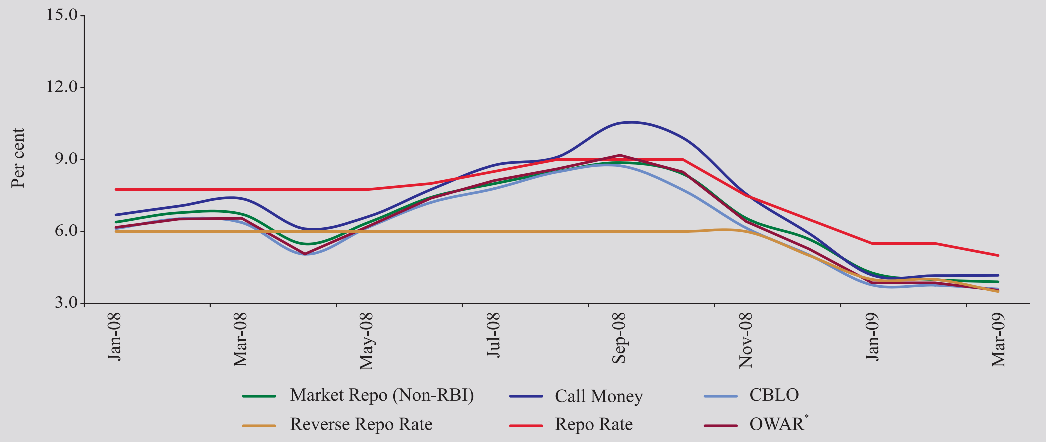
V.35 Interest rates in the collateralised segments of the money market – the market repo (outside the LAF) and the Collateralised Borrowing and Lending

Chart 25: Liquidity Adjustment Facility and the Call Rate



Obligation (CBLO) – moved in tandem with, but remained below, the call rate during 2008-09 in general, including in the last quarter of the year (Chart 26). Average daily volumes in the CBLO and market repo segments, declined sharply during April-October 2008, mainly on account of tightening of liquidity conditions and increasing recourse to LAF repos. The CBLO and market repo volumes picked up substantially in the last quarter of 2008-09, largely reflecting the easing of liquidity conditions and the enhanced lending capacity of mutual funds. The total average daily volume of the three segments of the money market was placed at Rs.82,000 crore in March 2009 as compared with Rs.41,000 crore in October 2008 and Rs.64,000 crore in April 2008. The shares of the CBLO, market repo and call

Chart 26: Money Market Interest Rates



* Overnight Weighted Average Rate (OWAR) is the daily volume-weighted interest rate of the overnight segments of call, CBLO and market repo.

segments in total money market were placed at 59 per cent, 26 per cent and 15 per cent in March 2009, nearly the same as in April 2008.

Certificates of Deposit

V.36 The outstanding amount of certificates of deposit (CDs) issued by SCBs increased from end-March 2008 up to September 2008. This was followed by a decline up to December 2008, reflecting the indirect impact of the global financial turmoil. Subsequently, with the easing of liquidity conditions, the outstanding amount of CDs rose from January 2009. The outstanding amount constituted 5.23 per cent of aggregate deposits of CD-issuing banks with significant inter-bank variation as on March 13, 2009. The weighted average discount rate (WADR) of CDs generally increased up to November 2008 but declined thereafter in consonance with the movements in other money market rates (Table 49).

Commercial Paper

V.37 The outstanding amount of commercial paper (CP) issued by

Table 49: Activity in Money Market Segments

(Rupees crore)

Year/ Month	Average Daily Volume (One Leg)						Commercial Paper		Certificates of Deposit	
	Call Money Market	Repo Market (Outside the LAF)	Collateralised Borrowing and Lending Obligation (CBLO)	Total (2+3+4)	Money Market Rate* (Per cent)	Term Money Market	Outstanding	WADR (Per cent)	Outstanding	WADR (Per cent)
1	2	3	4	5	6	7	8	9	10	11
2006-07	**10,863**	**8,419**	**16,195**	**35,477**	**6.57**	**506**	**21,329 +**	**8.08 +**	**64,821 +**	**8.24 +**
2007-08	**10,697**	**13,684**	**27,813**	**52,194**	**5.48**	**352**	**33,813 +**	**9.20 +**	**1,17,186 +**	**8.94 +**
2008-09 P	**11,218**	**14,330**	**30,776**	**56,323**	**6.43**	**397**	**47,312 +**	**10.57 +**	**1,61,257 +**	**9.39 +**
Apr 2008	9,758	14,966	38,828	63,552	5.31	374	37,584	8.85	1,50,865	8.49
May 2008	9,740	14,729	36,326	60,795	6.29	420	42,032	9.02	1,56,780	8.95
Jun 2008	10,854	11,262	35,774	57,890	7.35	253	46,847	10.03	1,63,143	9.16
Jul 2008	12,368	8,591	23,669	44,628	8.09	226	51,569	10.95	1,64,892	10.23
Aug 2008	11,704	10,454	22,110	44,268	8.65	501	55,036	11.48	1,71,966	10.98
Sep 2008	11,690	10,654	20,547	42,891	9.26	335	52,038	12.28	1,75,522	11.56
Oct 2008	14,497	9,591	16,818	40,906	8.66	345	48,442	14.17	1,58,562	10.00
Nov 2008	10,906	15,191	24,379	50,476	6.58	319	44,487	12.42	1,51,493	10.36
Dec 2008	10,820	16,943	32,261	60,024	5.37	415	40,391	10.70	1,51,214	8.85
Jan 2009	9,248	18,053	31,794	59,095	3.99	454	51,668	9.48	1,64,979	7.33
Feb 2009	11,121	19,929	38,484	69,534	3.89	669	52,560	8.93	1,75,057	6.73
March 2009 P	11,909	21,593	48,319	81,821	3.76	451	49,953	9.78 #	1,67,320	6.73 #

– : Not available. * : Weighted average rate of the call, CBLO and market repo segments.
+ : Fortnightly average for the year. Data for 2008-09 are up to mid-March 2009.
# : Provisional data as on mid-March 2009. P : Provisional.
WADR : Weighted Average Discount Rate.

corporates, which had increased gradually during April-August 2008-09, declined thereafter till December 2008, mainly reflecting tight liquidity conditions and general risk-aversion. Subsequently, the outstanding amount of CPs picked up, as liquidity conditions eased. Leasing and finance companies continued to be the major issuers of CPs, accounting for 63.1 per cent of total outstanding as of March 15, 2009 (Table 50). The WADR of CPs increased steadily up to October 2008, and generally declined subsequently up to mid-March 2009, with the easing of liquidity conditions (refer Table 49). The differential in the WADR of CP *vis-a-vis* CD, however, continues to remain elevated since October 2008.

Treasury Bills

V.38 The notified amounts for 91-day, 182-day and 364-day Treasury Bills (excluding MSS) were raised during the course of the year to finance the temporary cash mismatch, *inter alia*, arising from the expenditure on the Agricultural Debt Waiver Scheme. Thus, an additional amount of Rs.1,87,500 crore (Rs.97,000 crore, net) was raised over and above the notified amount during the year. During 2008-09, primary market yields on 91-day Treasury Bills increased steadily from 6.94 per cent on April 2, 2008 (first auction of the year 2008-09) and peaked at 9.36 per cent on July 30, 2008, reflecting tight liquidity conditions in response to measures taken to combat inflation such as hike in CRR and repo rate. It started declining thereafter, responding to various measures taken to ease liquidity and stimulate the economy amidst global recessionary trends. Yields on 91-day Treasury Bills declined sharply in December 2008 and were lowest at 4.58 per cent on January 14, 2009 and March 12, 2009 (Table 51 and Chart 27). Similar trend was observed in yields on 182-day

Table 50: Commercial Paper - Major Issuers

(Rupees crore)

Category of Issuer	End of					
	March 2007	March 2008	June 2008	September 2008	December 2008	March 15, 2009
1	2	3	4	5	6	
Leasing and Finance	12,594	24,925	34,957	39,053	27,965	31,528
	(70.5)	(76.5)	(76.6)	(75.0)	(73.5)	(63.1)
Manufacturing	2,754	5,687	8,150	9,925	6,833	13,925
	(15.4)	(17.4)	(17.4)	(19.1)	(18.0)	(27.9)
Financial Institutions	2,515	1,980	3,740	3,060	3,257	4,500
	(14.1)	(6.1)	(8.0)	(5.9)	(8.5)	(9.0)
Total	**17,863**	**32,592**	**46,847**	**52,038**	**38,055**	**49,953**
	(100.0)	**(100.0)**	**(100.0)**	**(100)**	**(100)**	**(100)**

Note : Figures in parentheses are percentage shares in the total outstanding.

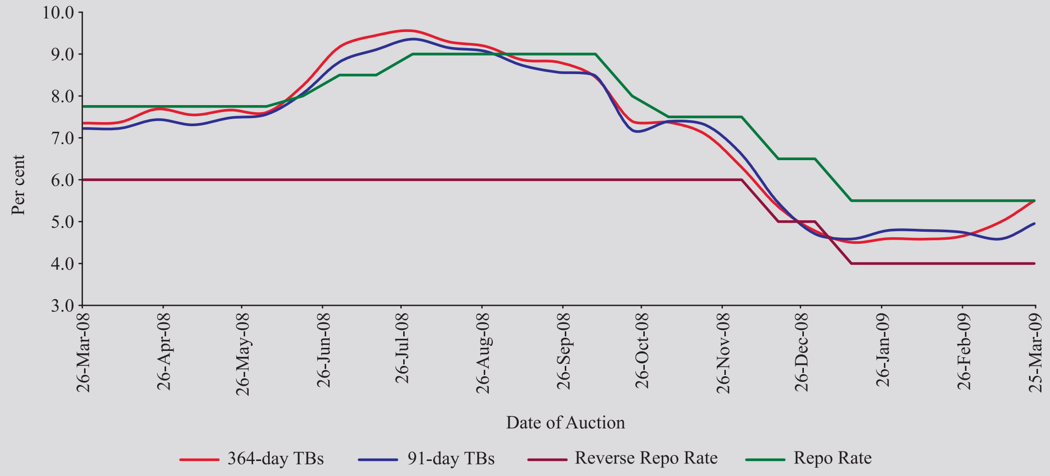
Table 51: Treasury Bills in the Primary Market

Year/Month	Notified Amount (Rupees crore)	Average Implicit Yield at Minimum Cut-off Price (Per cent)			Average Bid-Cover Ratio		
		91-day	182-day	364-day	91-day	182-day	364-day
1	2	3	4	5	6	7	8
2007-08	**2,24,500@**	**7.10**	**7.40**	**7.42**	**2.84**	**2.79**	**3.21**
2008-09	**2,99,000@**	**7.10**	**7.22**	**7.15**	**3.43**	**2.91**	**3.47**
Apr 2008	22,000	7.28	7.41	7.53	1.70	1.36	2.36
May 2008	21,000	7.41	7.55	7.61	2.65	2.78	3.05
Jun 2008	11,500	8.01	8.42	7.93	2.00	2.76	2.80
Jul 2008	16,000	9.07	9.33	9.39	2.35	2.72	2.70
Aug 2008	23,500	9.15	9.31	9.24	2.99	2.86	4.35
Sept 2008	25,000	8.69	8.92	8.83	3.06	3.04	3.57
Oct 2008	35,000	8.13	8.36	7.92	1.95	2.42	4.00
Nov 2008	28,000	7.30	7.13	7.23	7.95	2.97	4.33
Dec 2008	16,500	5.69	5.35	5.07	5.36	4.67	5.14
Jan 2009	38,500	4.69	4.60	4.64	4.56	3.22	4.80
Feb 2009	32,000	4.78	4.71	4.62	2.81	1.86	2.62
March 2009	25,000	4.77	4.86	5.25	2.10	2.67	1.44

@ : Total for the financial year.
Note : Notified amounts are inclusive of issuances under the MSS.

and 364-day Treasury Bills. The yield spread between 364-day and 91-day Treasury Bills was 48 basis points during March 2009 (8.9 basis points in March 2008).

Chart 27 : Yields on Treasury Bills



Foreign Exchange Market

V.39 During 2008-09, the rupee depreciated on account of widened trade deficit, capital outflows and strengthening of the US dollar *vis-à-vis* other major currencies. The rupee/US dollar exchange rate was Rs. 39.99 per dollar at end-March 2008. It fell to Rs. 52.09 per dollar on March 5, 2009, before recovering to Rs. 50.95 per dollar at end-March 2009. As on March 31, 2009, the Indian rupee had depreciated by 21.5 per cent against the US dollar over its level on March 31, 2008. Over the same period, the rupee experienced a depreciation of 6.5 per cent against the euro, 22.8 per cent against the Japanese yen and 23.6 per cent against the Chinese yuan. However, the rupee showed an appreciation of 9.1 per cent against the pound sterling. The rupee/US dollar exchange rate was 49.90 on April 15, 2009. As on April 15, 2009, the rupee had generally appreciated against the US dollar, the euro and the Japanese yen but depreciated against the pound sterling over the end-March 2009 level (Chart 28).

V.40 It is also useful to look at the indices of NEER and REER, which are often used as indicators of external competitiveness over a period of time. REER captures movements in cross-currency exchange rates as well as inflation differential between India and its major trading partners over time. The average 6-currency trade-based REER (base: 1993-94=100) was 114.09 in 2007-08, indicating an overvaluation of 14.1 per cent in real terms. There was a reduction in the extent of overvaluation during the first half of 2008-09 and the REER has moved closer to its base level (1993-94=100), especially since December 2008 (Chart 29). The 6-currency trade-based REER which stood at 112.16 in April 2008, indicating an overvaluation of 12.2 per cent, gradually declined to 100.07 in February 2009 mainly on account of significant depreciation of the rupee against the US dollar and against other major currencies like the euro, the Japanese yen and the Chinese yuan during 2008-09. The sharp decline in inflation rate in India

Chart 28: Movement of Rupee *vis-à-vis* Major Currencies

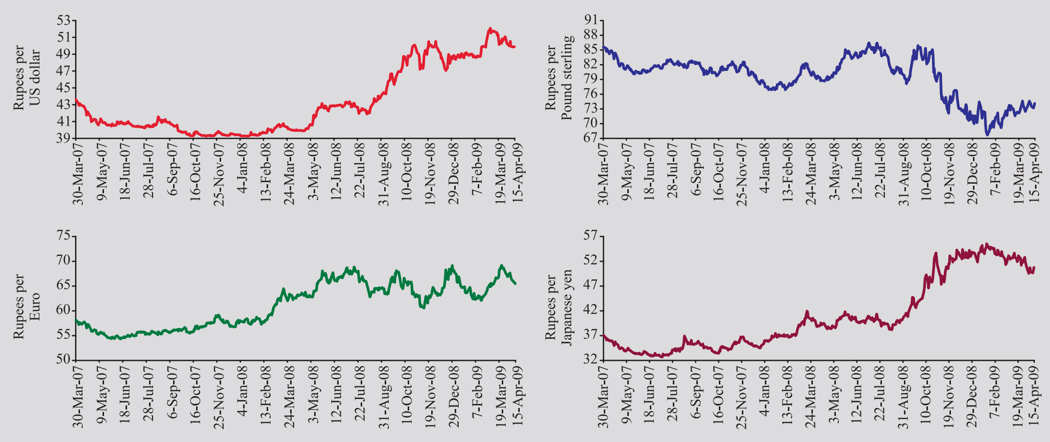
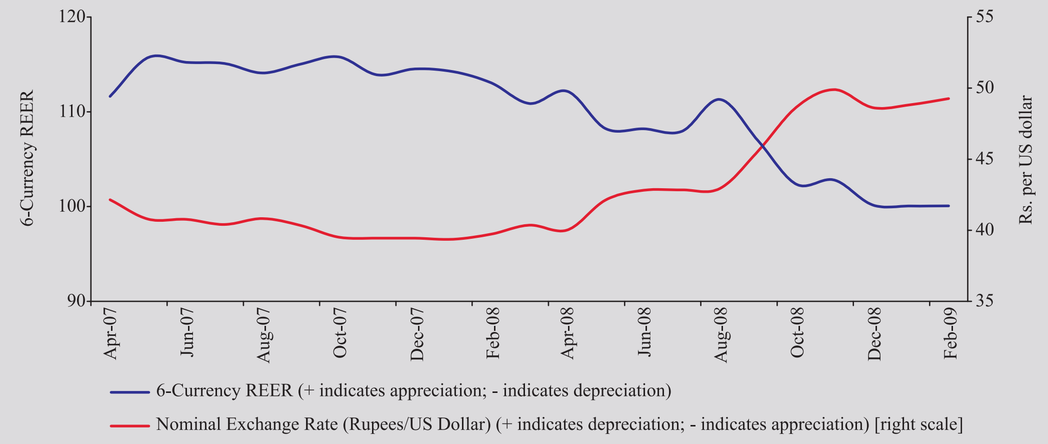


Chart 29: Nominal Exchange Rate (Rs./US Dollar) and 6-Currency REER



in the recent months has also contributed towards the correction in the extent of the overvaluation of the rupee. Over the same period, the 6-currency NEER declined gradually from 70.63 in April 2008 to 62.75 in February 2009 (Table 52).

V.41 The 36-currency trade-weighted NEER and REER depreciated by 5.3 per cent and 10.7 per cent, respectively, between March 2008 and February 2009 (as against an appreciation of 6.9 per cent and 3.0 per cent, respectively, during the

Table 52: Nominal and Real Effective Exchange Rate of the Indian Rupee (Trade-based Weights)

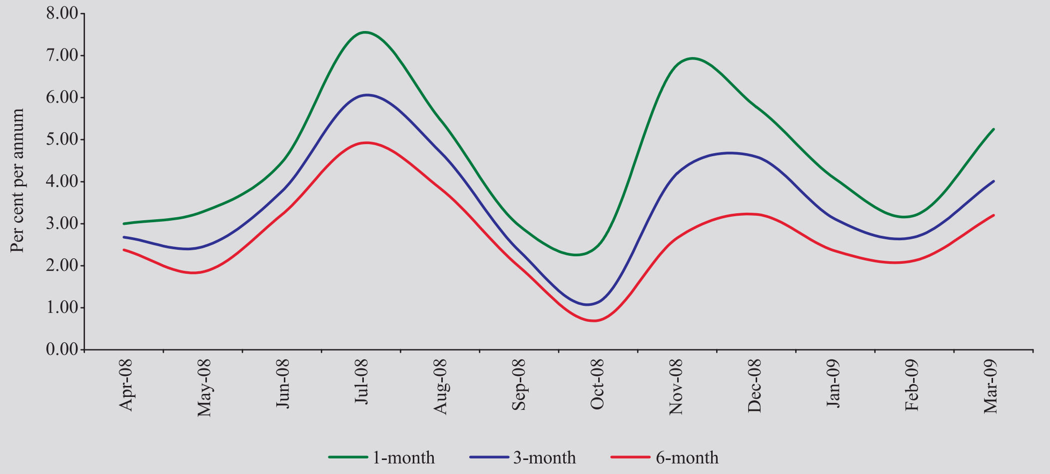
Year/Month	Base : 1993-94 (April-March) = 100				Year/Month	Base : 1993-94 (April-March) = 100			
	6-Currency Weights		36-Currency Weights			6-Currency Weights		36-Currency Weights	
	NEER	REER	NEER	REER		NEER	REER	NEER	REER
1	2	3	4	5	1	2	3	4	5
2007-08 (P)	**74.17**	**114.09**	**93.91**	**104.81**	Sep. 2008(P)	64.37	106.96	85.42	95.97
Apr 2008 (P)	70.63	112.16	93.26	101.86	Oct 2008(P)	62.08	102.36	83.23	92.29
May 2008 (P)	67.48	108.23	89.04	97.72	Nov 2008(P)	63.06	102.80	84.69	92.54
Jun 2008 (P)	66.38	108.20	87.65	97.76	Dec 2008(P)	62.12	100.18	83.91	90.40
July 2008(P)	65.83	107.94	87.04	97.40	Jan 2009(P)	62.28	100.06	83.63	90.01
Aug 2008(P)	67.22	111.30	88.60	99.65	Feb 2009(P)	62.75	100.07	85.20	91.07

Movement of Average Exchange Rate – Per cent change

	2007-08	2007-08 (April-Feb)	2008-09 (April-Feb)
36-currency trade-based REER	6.4	6.9	-9.4
36-currency trade-based NEER	9.3	9.9	-8.2
6-Currency trade-based REER	8.1	8.5	-7.8
6-Currency trade-based NEER	6.7	7.3	-12.9
Memo:			
Rupees/ US dollar Exchange Rate	12.5		-12.4*

NEER : Nominal Effective Exchange Rate. REER : Real Effective Exchange Rate. P : Provisional.
* : Average for April-March.
Note : Rise in indices indicates appreciation of the rupee and *vice versa*.

Chart 30: Movement in Rupees/US Dollar Forward Premia

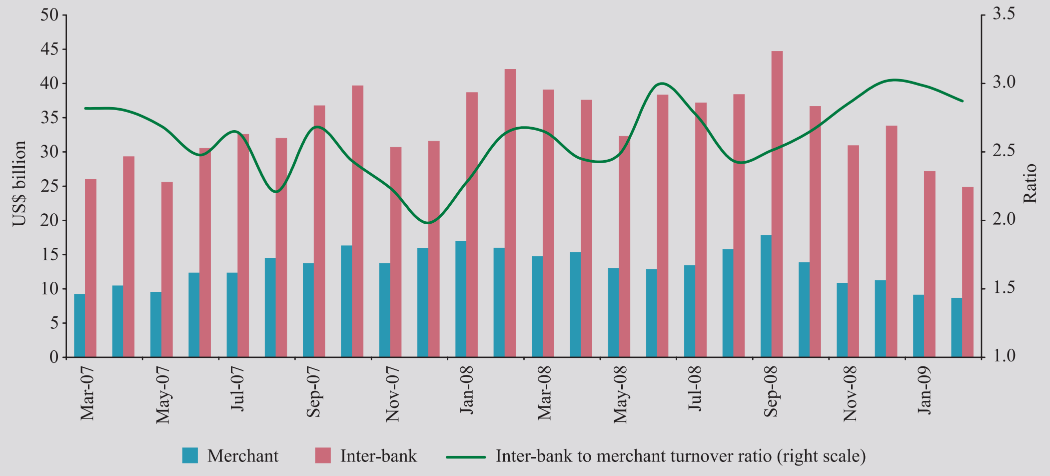


corresponding period of the previous year).

V.42 During 2008-09, forward premia showed significant variation reflecting the underlying supply and demand conditions. As on March 31, 2009, the one month, three month and six month premia were at 4.71 per cent, 3.34 per cent and 2.78 per cent, respectively. As on April 9, 2009, the one month, three month and six month premia were 3.85 per cent, 3.29 per cent and 2.76 per cent, respectively (Chart 30).

V.43 The daily average turnover in the foreign exchange market was lower at US$ 47.8 billion during April-February 2008-09 as compared with US$ 47.4 billion during the corresponding period of the previous year. The ratio of inter-bank to merchant turnover increased to 2.7 from 2.4 during this period (Chart 31).

Chart 31: Daily (Average) Turonver in Foreign Exchange Market



Credit Market

V.44 Bank deposit and lending rates, which had firmed up during 2008-09 up to October 2008, started easing from November 2008, reflecting measures taken by the Reserve Bank. Interest rates offered by public sector banks (PSBs) on deposits of maturity of one year to three years were in the range of 8.00-9.25 per cent in March 2009 as compared with the range of 8.50-10.75 per cent in December 2008, while those on deposits of maturity of over three years were in the range of 7.50-9.00 per cent as compared with the range of 8.50-9.75 per cent during the same period (Table 53). Similarly, the range of interest rates offered by private sector

Table 53: Deposit and Lending Rates

(Per cent)

Item	March 2007	March 2008	September 2008	December 2008	March 2009
1	2	3	4	5	6
1. Domestic Deposit Rate					
Public Sector Banks					
Up to 1 year	2.75-8.75	2.75-8.50	2.75-10.25	2.75-10.25	2.75-8.25
More than 1 year and up to 3 years	7.25-9.50	8.25-9.25	8.75-10.25	8.50-10.75	8.00-9.25
More than 3 years	7.50-9.50	8.00-9.00	8.50-9.75	8.50-9.75	7.50-9.00
Private Sector Banks					
Up to 1 year	3.00-9.00	2.50-9.25	3.00-9.75	3.00-10.00	3.00-8.75
More than 1 year and up to 3 years	6.75-9.75	7.25-9.25	8.30-10.50	9.00-11.00	7.50-10.25
More than 3 years	7.75-9.60	7.25-9.75	8.25-10.25	8.50-11.00	7.50-9.75
Foreign Banks					
Up to 1 year	3.00-9.50	2.25-9.25	3.50-9.75	3.50-9.75	2.50-8.50
More than 1 year and up to 3 years	3.50-9.50	3.50-9.75	3.50-10.50	3.50-11.25	2.50-9.50
More than 3 years	4.05-9.50	3.60-9.50	3.60-11.00	3.60.11.00	2.50-10.00
2. Benchmark Prime Lending Rate					
Public Sector Banks	12.25-12.75	12.25-13.50	13.75-14.75	12.50-14.00	11.50-14.00
Private Sector Banks	12.00-16.50	13.00-16.50	13.75-17.75	13.00-17.25	12.75-16.75
Foreign Banks	10.00-15.50	10.00-15.50	10.00-16.00	10.00-17.00	10.00-17.00
3. Actual Lending Rate*					
Public Sector Banks	4.00-17.00	4.00-17.75	6.00-18.75	5.25-18.00	–
Private Sector Banks	3.15-25.50	4.00-24.00	5.06-23.00	5.06-30.00	–
Foreign Banks	5.00-26.50	5.00-28.00	5.00-25.50	5.00-26.00	–
4. Weighted Average Lending Rate**					
Public Sector Banks	11.81	12.15 #	–	–	–
Private Sector Banks	11.91	12.67 #	–	–	–
Foreign Banks	13.03	12.94 #	–	–	–

– : Not available. # : Provisional.

* : Interest rate on non-export demand and term loans above Rs.2 lakh excluding lending rates at the extreme five per cent on both sides.

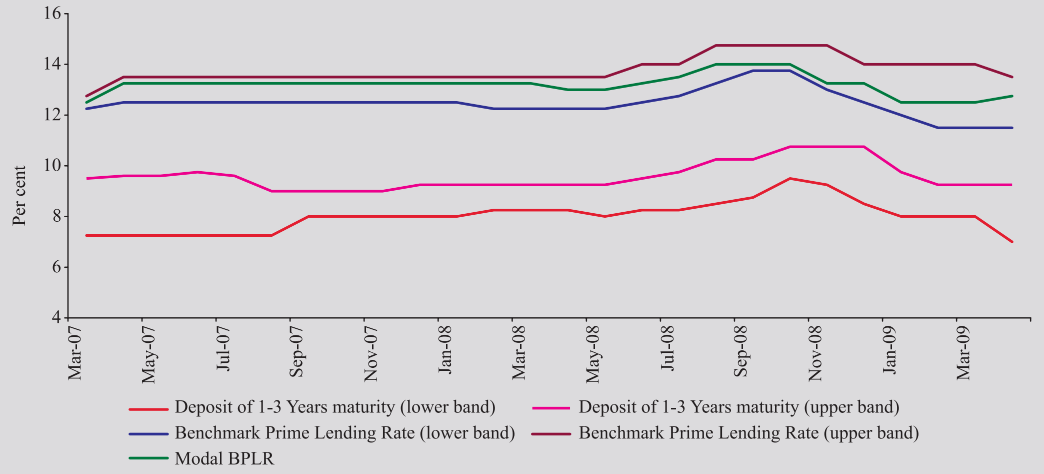
** : Data based on the accounts with credit limit of over Rs.2 lakh and is exclusive of inland and foreign bills purchased and discounted. Oustanding amounts are used as weights for calculating average lending rates.

banks and foreign banks on deposits of varying maturity declined in March 2009 as compared with the range in December 2008. Notably, the administered interest rates on most small savings instruments have remained unchanged since March 2003.

V.45 The benchmark prime lending rates (BPLRs) of PSBs and private sector banks declined from the range of 12.50-14.00 per cent and 13.00-17.25, respectively, in December 2008 to the range of 11.50-14.00 per cent and 12.75-16.75 per cent, respectively, in March 2009 (Chart 32). The range of BPLRs of foreign banks remained unchanged at 10.00-17.00 per cent during the same period. The weighted average BPLR of PSBs and private sector banks decreased from 14.00 per cent and 16.48 per cent, respectively, in October 2008 to 12.48 per cent and 16.03 per cent, respectively, in March 2009. The weighted average BPLR of foreign banks decreased marginally from 15.32 to15.07 per cent during the same period.

V.46 The share of sub-BPLR lending (excluding export credit and small loans) for PSBs decreased to 68.0 per cent in December 2008 from 70.6 per cent in March 2008. The sub-BPLR lending of private sector banks, at 87.9 per cent, decreased from the March 2008 level of 88.7 per cent. The sub-BPLR lending of foreign banks, however, declined significantly from the high of 77.6 per cent in March 2008 to 61.3 per cent in December 2008. Together, the share of sub-BPLR lending for all SCBs (excluding export credit and small loans) declined from 75.9 per cent in March 2008 to 71.5 per cent in December 2008. At the disaggregated level, the major share of sub-BPLR lending of PSBs was for longer tenure term loans (above 5 years), whereas for the private sector banks and foreign banks, the major share of sub-BPLR loans was for consumer credit.

Chart 32: Deposit and Lending Rates - Public Sector Banks



Government Securities Market

Central Government Securities

V.47 The financial year 2008-09 was characterised by a significantly higher level of Central Government market borrowing than budgeted earlier (as detailed in Chapter II), particularly during the second half of the year, in order to finance the expanding fiscal deficit in the wake of fiscal stimulus measures and various other committed expenditure of the Government. During the first six months of 2008-09, all issuances of dated securities were in accordance with the issuance calendar for the first half of the year, except on two occasions (Table 54). On the other hand, for the second half of the year, apart from the scheduled issuance calendar for dated securities released on September 26, 2008 in consultation with the Government of India, three additional indicative calendars were issued on December 5, 2008, January 6, 2009 and February 10, 2009. The Government of India raised Rs.1,16,000 crore to meet the additional expenditure approved by the Parliament by way of two supplementary demands for grants and various stimulus packages.

V.48 Furthermore, the MoU on the MSS signed between the Government of India and the Reserve Bank, in March 2004, was amended on February 26, 2009 to enable the Government and the Reserve Bank to de-sequester MSS cash balance for financing the Government's approved expenditure. Accordingly, it was decided to transfer an amount of Rs.45,000 crore, in installments, from the MSS cash account to the normal cash account of Government of India by March 31, 2009. An equivalent amount of government securities was to accordingly form part of the normal borrowing of the Government. In this regard, an amount of Rs.12,000 crore was transferred from the MSS cash account to the normal cash account of the Government of India on March 4, 2009. Inclusive of this amount, gross and net market borrowings (dated securities and 364-day Treasury Bills) of the Central Government during 2008-09 amounted to Rs.3,18,550 crore and Rs.2,42,316 crore, respectively, accounting for 93 per cent and 91 per cent of the revised market borrowings for the year, respectively. In view of the comfortable cash position, the Government of India, in consultation with the Reserve Bank, decided not to effect the transfer of the balance amount of Rs.33,000 crore in 2008-09. Based on the fund requirements of the Government, the balance amount would be de-sequestered against the approved market borrowing for 2009-10 or the MSS securities would be bought back in 2009-10. The MSS outstanding as on March 31, 2009 was Rs.88,773 crore.

V.49 Despite the significantly enhanced level, the market borrowing programme was managed smoothly by undertaking the following measures: (i) synchronising OMO (purchase of government securities) with issuances of dated securities under the market borrowing calendar, (ii) creating fiscal space by way of buyback of securities issued under the MSS, (ii) amending the MoU on MSS in February 2009, allowing

Table 54: Central Government Dated Securities Issued during 2008-09

(Amount in Rupees crore/Maturity in years/Yield in per cent)

	Borrowings as per Auction Calendar			Actual Borrowings			
Sr. No.	Period of auction	Amount	Residual Maturity	Date of Auction	Amount	Residual Maturity	Yield
1	2	3	4	5	6	7	8
1.	April 04 - 11, 2008	6,000	5-9 year	April 11, 2008	6,000	7.38	8.14
		4,000	20- year and above		4,000	24.37	8.67
2.	April 18 - 25, 2008	6,000	10-14 year	April 21, 2008	6,000	10.00	8.24
		4,000	20- year and above		4,000	28.13	8.77
3.	May 2-9, 2008	6,000	5-9 year	May 9,2008	6,000	7.92	7.96
		4,000	20-year and above		4,000	24.29	8.35
4.	May 16-23, 2008	6,000	10-14 year	May 23, 2008	6,000	9.91	8.07
		4,000	20-year and above		4,000	23.72	8.52
5.	May 30- June 6, 2008	6,000	10-14 year	June 6, 2008	6,000	9.87	8.26
		4,000	20 year and above		4,000	24.22	8.72
6.	June 13 - 20, 2008	6,000	15-19 year security	June 20,2008	6,000	18.64	9.25
7.	July 4-11, 2008	6,000	10-14 year	July 4, 2008	6,000	9.79	9.13
		4,000	20 year and above		4,000	23.60	10.02
8.	July 18-25,2008	6,000	15-19 year	July 24,2008	6,000	9.74	9.08
9.	August 1-8, 2008	6,000	10-14 year	August 8, 2008	6,000	9.70	9.14
		4,000	20 year and above		4,000	24.05	9.88
10.	August 14-22, 2008	6,000	15-19 year	August 22, 2008	6,000	18.47	9.86
11.	September 5-12, 2008	5,000	10-14 year	September 12, 2008	5,000	9.60	8.30
		3,000	20-year and above		3,000	23.95	8.70
				September 26,2008	6,000	12.65	9.04
					4,000	23.38	9.26
12.	October 3-10, 2008	6,000	5-9 year	Auction Cancelled	–	–	–
		4,000	20-year and above	Auction Cancelled	–	–	–
13.	October 17-24, 2008	6,000	10-14 year	Auction Cancelled	–	–	–
		4,000	20-year and above	Auction Cancelled	–	–	–
14.	October 31-November 7, 2008	6,000	5-9 year	October 31 , 2008	6,000	6.00	7.56
		4,000	20-year and above		4,000	23.82	8.08
				November 7,2008	6,000	9.45	7.73
					4,000	23.26	8.44
15.	November 14-21, 2008	6,000	5-9 year	November 14,2008	6,000	5.96	7.38
					4,000	23.78	8.21
				November 21,2008	6,000	5.94	7.16
					3,000	12.50	7.42

(Contd...)

Table 54: Central Government Dated Securities Issued during 2008-09 *(Concld.)*

(Amount in Rupees crore/Maturity in years/Yield in per cent)

	Borrowings as per Auction Calendar			Actual Borrowings			
Sr. No.	Period of auction	Amount	Residual Maturity	Date of Auction	Amount	Residual Maturity	Yield
1	2	3	4	5	6	7	8
16.	December 5-12, 2008	3,000	10-14 year	Preponed to			
				November 21, 2008	–	–	–
		6,000	5-9 year	December 12, 2008	6,000	4.72	6.24
		4,000	20-year and above		4,000	25.65	6.98
17.	January 2-9, 2009	6,000	5-9 year	January 2, 2009	6,000	8.65	5.73
		4,000	20-year and above		4,000	26.68	6.53
18.	January 5-9, 2009	7,000	5-9 year	January 9, 2009	7,000	7.25	6.70
		4,000	15-19 year		4,000	14.24	7.35
		4,000	20-year and above		4,000	25.58	7.60
19.	January 12-16, 2009	6,000	5-9 year	January 16, 2009	4,000	5.79	5.5
		4,000	20-year and above		3,000	30.00	6.83
					3,000	9.26	5.45
20.	January 23-30, 2009	6,000	10-14 year	January 30, 2009	3,000	5.75	6.02
		4,000	20-year and above		4,000	10.00	6.05
21.	February 6-9, 2009	5,000	5-9 year		3,000	29.96	7.35
		2,000	15-19 year	February 6, 2009	5,000	8.55	6.83
22.	February 13-20, 2009	6,000	10-14 year		2,000	14.17	7.15
		2,000	20-year and above	February 13, 2009	6,000	9.96	5.94
23.	February 20-27, 2009	6,000-7,000			2,000	29.23	7.37
		2,000-3,000		February 24, 2009	7,000	8.51	6.98
		2,000-3,000			3,000	13.22	7.50
24.	February 28-March 6, 2009	6,000-7,000			2,000	25.46	7.75
		2,000-3,000		March 6, 2009	8,000	9.90	6.50
		2,000-3,000			2,000	15.93	7.75
25.	March 6-March 13, 2009	6,000-7,000			2,000	29.86	7.90
		2,000-3,000		March 20, 2009	4,000	4.92	6.60
		2,000-3,000			6,000	9.86	6.59
26.	March 13-March 20, 2009	6,000-7,000		March 26,2009	5,000	4.43	6.77
		2,000-3,000			7,000	9.84	6.97
		2,000-3,000					

Note : 1. Issuances on December 12, 2008 and January 2, 2009 were as per calendar issued on December 5, 2008.
2. Issuances from January 12, 2009 to February 13, 2009 were as per calendar issued on January 6, 2009.
3. Issuances from February 24, 2009 to March 26, 2009 were as per calendar issued on February 10, 2009.

transfer from the MSS cash account to the normal cash account of the Government of India for financing of fiscal defict, and (iv) purchase of government securities on NDS-OM platform. All auctions during 2008-09 were for reissuance of existing securities, barring four new issues. The bid-cover ratio during 2008-09 was comparable with that of 2007-08. The devolvement on primary dealers (PDs) was higher in 2008-09 as compared with the previous year. The weighted average maturity and weighted average yield, both declined during 2008-09 (Table 55).

State Government Securities

V.50 The net allocation for the market borrowings of the State Governments during 2008-09 was placed at Rs.51,719 crore. Taking into account repayment of Rs.14,371 crore and additional allocation of Rs.62,990 crore (of which Rs.19,768 crore was on account of shortfall in NSSF collection and Rs.28,896 crore was on account of second fiscal stimulus package), the gross allocation of market borrowings was placed at Rs.1,29,081 crore for 2008-09 as compared with Rs.80,570 crore during the previous year. Twenty six State Governments and the Union Territory of Puducherry raised a total amount of Rs.1,18,138 crore through auctions (Table 56) with cut-off yields in the range 5.80-9.90 per cent as compared with Rs.67,779 crore by 25 State Governments (cut-off yields in the range 7.84-8.90 per cent) during the previous year. The weighted average interest rate on market loans was lower at 7.85 per cent during 2008-09 as compared with 8.25 per cent last year. The spreads of State Government securities over the yields of Central Government securities of corresponding maturity ranged between 21-236 basis points as compared with 19-90 basis points during 2007-08.

Table 55: Issuances of Central Government Dated Securities

	2007-08	2008-09
1	2	3
Number of Issuances		
Re Issue	34	52
New Issues	1	4
Bid-cover Ratio (Range)	1.58-4.76	1.22-4.51
Weighted Average		
Maturity (years)	14.9	13.8
Yield (per cent)	8.12	7.69
Devolvement on PDs (Rupees crore)	957	10,773

Secondary Market

V.51 Yields in the government securities market hardened from April 2008 till the first fortnight of July 2008 on account of the heightened inflationary expectations in the face of sharp increase in global commodity prices and concomitant monetary policy responses – hikes in the CRR and the LAF repo rate. Thereafter, the government securities' yields generally eased till around mid-September 2008 as inflationary pressures abated. The yields, however, temporarily hardened around end-September 2008 as liquidity conditions tightened in the wake of adverse developments in the international financial markets and advance tax outflows. In line with the liquidity augmenting measures taken by the

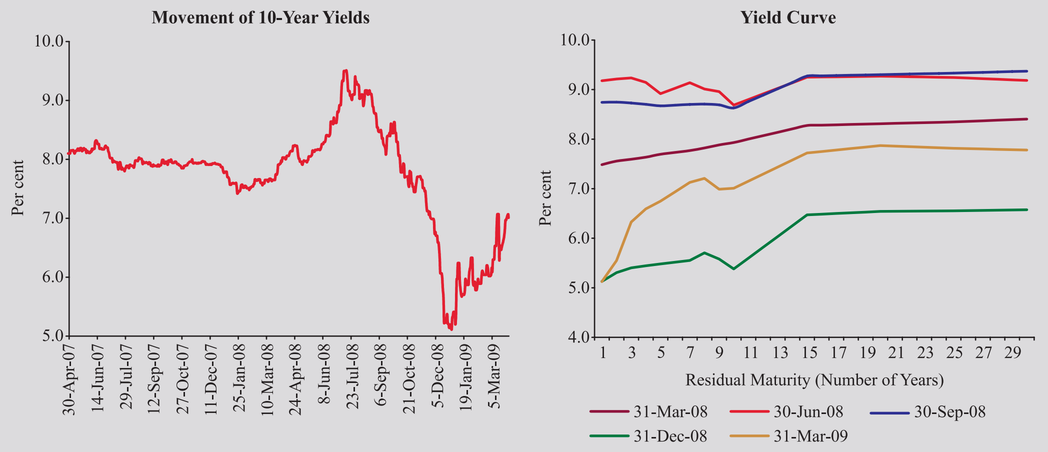
Table 56: Market Borrowings of the State Governments/U.T.s - 2008-09

Item		Date	Cut-off Yield (Per cent)	Tenor (Years)	Amount Raised (Rupees crore)
1		2	3	4	5
Auction					
i.	First	April 4, 2008	8.50-8.60	10	2,648
ii.	Second	May 27, 2008	8.39-8.68	10	3,264
iii.	Third	June 27, 2008	9.38-9.59	10	2,300
iv.	Fourth	July 10, 2008	9.81	10	500
v.	Fifth	August 31,2008	9.86-9.90	10	2,100
vi.	Sixth	August 26,2008	9.30-9.44	10	2,060
vii.	Seventh	September 9, 2008	8.80	10	1,800
viii.	Eighth	September 25, 2008	8.81-8.88	10	1,212
ix.	Ninth	October 7,2008	8.50-8.89	10	2,012
x.	Tenth	October 22, 2008	7.97-8.11	10	4,300
xi	Eleventh	November 11, 2008	8.21-8.54	10	3,595
xii.	Twelfth	November 20, 2008	7.77-7.86	10	4,850
xiii.	Thirteenth	December 11, 2008	6.95-7.10	10	5,910
xiv.	Fourteenth	December 23, 2008	6.38-6.45	10	4,795
xv.	Fifteenth	January 6, 2009	5.80-6.10	10	5,702
xvi.	Sixteeth	January 13, 2009	6.65-6.73	10	5,795
xvii.	Seventeenth	January 22,2009	7.00-7.13	10	7001
xviii.	Eighteenth	February 5,2009	7.24-7.29	10	5149
xix.	Nineteenth	February 17,2009	7.40-7.50	10	8362
xx.	Twentieth	February 27,2009	7.55-7.93	10	13424
xxi.	Twenty one	March 9, 2009	8.16-8.89	10	14095
xxii.	Twenty two	March 17, 2009	8.40-8.59	10	12215
xxiii.	Twenty three	March 24, 2009	8.08-8.48	10	5048
	Grand Total				**1,18,138**

Reserve Bank and the sharp decline in WPI inflation, the yields eased substantially till end-December 2008. The 10-year yield stood at 5.31 per cent as at end-December 2008, as compared with 8.63 per cent as at end-September 2008 and 7.93 per cent as at end-March 2008 (Chart 33).

V.52 Notwithstanding further reduction in the CRR and LAF rates in January 2009, market sentiment worsened in January and February 2009, following the large and abrupt increase in the Government's market borrowing programme for 2008-09, at a time when the system had excess SLR investment amounting to around Rs.1,79,000 crore. The large market borrowing requirement of the Government for 2009-10 also weighed on the market. Subsequent to the announcement of the Interim Budget on February 16, 2009, even as the Reserve Bank initiated a series of auction-based purchases of government dated securities in addition to its purchases through the NDS-OM, the 10-year yield increased to 6.02 per cent as at end-February 2009. The yields continued to

Chart 33: Yields on Central Government Securities



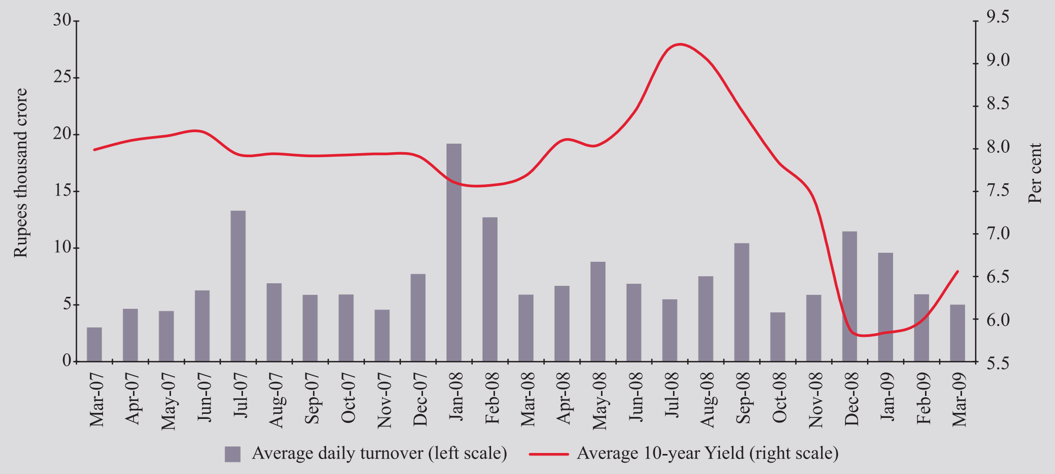
harden in early March 2009 despite a further cut in the LAF interest rates effective March 5, 2009. The benchmark 10-year paper (6.05 per cent government security 2019), however, dropped sharply by 40 basis points (from the closing level of March 12, 2009) to 7.07 per cent following the rejection of all bids received for sale of Government dated securities on March 13, 2009. The subsequent announcement of enhanced amounts of auction-based purchases of the government dated securities by the Reserve Bank on March 16 and 19, 2009, helped to improve market sentiments. The ten-year yield stood at 7.01 per cent as at end-March 2009.

V.53 The government securities yield curve moved upwards and peaked by end-July 2008 during 2008-09 (Chart 33). Thereafter, it moved downwards till end-December 2008 but again firmed up over the last quarter of 2008-09. The yield curve is kinked at the 5-year and 10-year yields where trading is concentrated and is flat beyond 15 years. As a sequel, the spread between 10-year and 15-year yields was 71 basis points as against the spread of 6 basis points between the 15-year and 30-year yields, as at end-March 2009.

V.54 The daily turnover in the Central Government securities market averaged Rs.6,935 crore during January-March 2009, which was around 4 per cent lower than that in the preceding quarter (Chart 34).

V.55 During 2008-09, the yield on 5-year AAA-rated corporate bonds, witnessed a hardening trend up to October 2008 and began to soften thereafter. The yield has been inching up again since February 2009. The credit spread between the yields on 5-year AAA-rated bonds and 5-year government securities have been wider in the second half of 2008-09 as compared with the first half (Chart 35). However, it narrowed during the fourth quarter of 2008-09, the spread being 179 basis points on March 31, 2009 as compared to 312 basis points on December 31, 2008.

Chart 34: Average Daily Turnover and Yields in Government Securities Market



Equity Market

Primary Market

V.56 The primary market segment of the domestic capital market witnessed a marginal increase during the fourth quarter of 2008-09. Cumulatively, resources raised through public issues declined sharply to Rs.14,671 crore during 2008-09 from Rs.83,707 crore during 2007-08. The number of issues also declined considerably from 119 to 45 (Table 57). Out of the 45 issues during 2008-09, 21 were initial public offerings (IPOs) issued by private sector companies, constituting 13.9 per cent of total resource mobilisation. Furthermore, all the issues during 2008-09 were equity issues by private non-financial companies except two by private financial companies. The average size of public issues declined

Chart 35: Credit Spreads

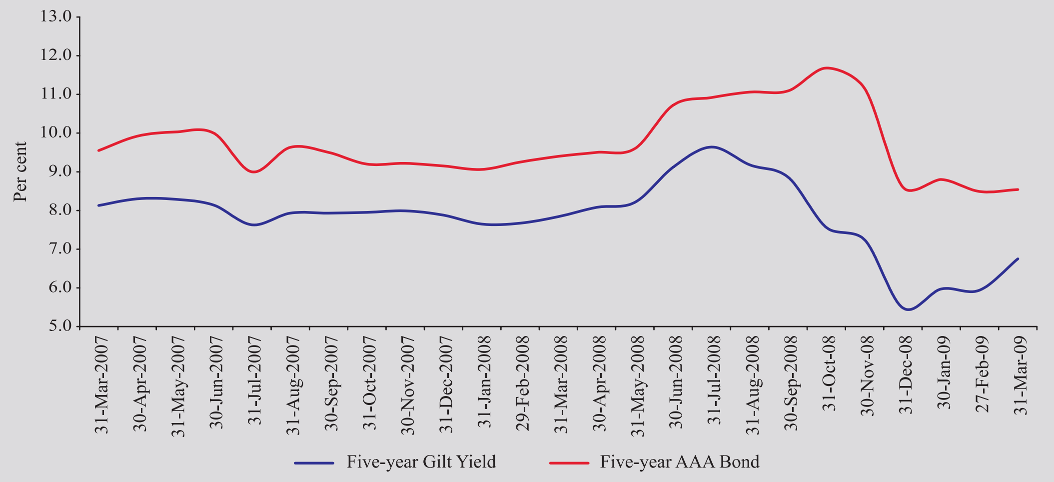


Table 57: Mobilisation of Resources from the Primary Market

(Amount in Rupees crore)

Item	No. of Issues	Amount	No. of Issues	Amount
1	2	3	4	5
	2007-08		2008-09 P	
A. Prospectus and Rights Issues*				
1. Private Sector (a+b)	**115**	**63,638**	**45**	**14.671**
a) Financial	11	14,676	2	466
b) Non-financial	104	48,962	43	14,205
2. Public Sector (a+b+c)	**4**	**20,069**	–	–
a) Public Sector Undertakings	–	–	–	–
b) Government Companies	2	2,516	–	–
c) Banks/Financial Institutions	2	17,553	–	–
3. Total (1+2)	**119**	**83,707**	**45**	**14,671**
of which:				
(i) Equity	116	82,398	45	14,671
(ii) Debt	3	1,309	–	–
	April-December 2007		April-December 2008	
B. Private Placement				
1. Private Sector (a+b)	**1,245**	**94,139**	**522**	**46,687**
a) Financial	693	63,916	235	26,265
b) Non-financial	552	30,223	287	20,422
2. Public Sector (a+b)	**117**	**55,817**	**130**	**65,605**
a) Financial	80	38,621	62	34,773
b) Non-financial	37	17,196	68	30,832
3. Total (1+2)	**1,362**	**1,49,956**	**652**	**1,12,292**
of which:				
(i) Equity	–	–	1	114
(ii) Debt	1,362	1,49,956	651	1,12,178
C. Euro Issues	**26**	**26,556**	**13**	**4,788**

P : Provisional. * : Excluding offers for sale. – : Nil/Negligible.

from Rs.703.4 crore during 2007-08 to Rs.326.0 crore during 2008-09.

V.57 Mobilisation of resources through private placement declined by 25.1 per cent during April-December 2008 (the period for which the latest data are available) as against an increase of 35.2 per cent during April-December 2007 (refer Table 57). Public sector entities accounted for 58.4 per cent of total mobilisation as compared with 37.2 per cent during the corresponding period of the previous year. Resource mobilisation through financial intermediaries (both from public and private sector) registered a decline of 40.5 per cent over the corresponding period of last year and accounted for 54.4 per cent of the total mobilisation during April-December 2008.

However, resources raised by non-financial intermediaries registered an increase of 8.1 per cent (45.7 per cent of total resource mobilisation) during April-December 2008 over the corresponding period of the previous year.

V.58 During 2008-09, resources raised through Euro issues – American Depository Receipts (ADRs) and Global Depository Receipts (GDRs) – by Indian corporates declined significantly by 82.0 per cent to Rs.4,788 crore as compared with the corresponding period of the previous year. All the Euro issues during the financial year were GDR issues.

V.59 During 2008-09, net resource mobilisation by mutual funds turned negative; there was a net outflow of Rs.28,297 crore during the year as compared to a net inflow of Rs.1,53,801 crore during 2007-08 (Table 58). Scheme-wise, during 2008-09, income/debt oriented schemes witnessed a net outflow of Rs.32,161 crore, while growth/equity oriented schemes registered a net inflow of Rs.4,024 crore. There were substantial outflows during the months of June 2008 (Rs.39,233 crore), September 2008 (Rs.45,651 crore) and October 2008 (Rs.45,796 crore) due to the uncertain conditions in the stock markets and redemption pressures from banks and corporates on account of tight liquidity conditions prevailing at that time. The Reserve Bank then announced immediate measures to provide liquidity support to mutual funds through banks. With the easing of overall liquidity conditions, investment in mutual funds again became attractive. During November 2008 to February 2009, net resource mobilisation by mutual funds turned positive. However, during March 2009 there was a net outflow of Rs.98,697 crore.

Secondary Market

V.60 The domestic stock markets, after remaining weak and volatile during January-February 2009, witnessed gains

Table 58: Resource Mobilisation by Mutual Funds

(Rupees crore)

Category	2007-08		2008-09	
	Net Mobilisation	Net Assets	Net Mobilisation	Net Assets
1	2	3	4	5
Private Sector	1,33,304	4,15,621	-34,018	3,35,527
Public Sector *	20,497	89,531	5,721	81,772
Total	**1,53,801**	**5,05,152**	**-28,297**	**4,17,299**

* : Including UTI Mutual fund.

Note : 1. Data exclude funds mobilised under Fund of Funds Schemes.
2. Net Mobilisation is net of redemptions.
3. Net Assets is for end-period.

Source : Securities and Exchange Board of India.

during March 2009. The losses during the first two months of 2009 were mainly due to the downward trend in international equity markets on account of more than expected contraction of economic growth in the US, the UK, Japan and China pointing towards deepening of recession. Other factors that led to weak equity markets were heavy net sales by FIIs in the Indian equity market, slowdown in industrial and export growth, depreciation of the rupee against the US dollar, fall in ADR prices, lower than expected corporate earnings in the third quarter of 2008-09, revelations about financial irregularities in a particular information technology company and other sector and stock specific news. In line with the behaviour of equity markets across the world, the Indian stock markets have been showing improvement since March 2009. The reasons for the improvement are announcement of the details of US$ 1 trillion public private investment program by the US Treasury, some major US banks posting profits for the first two months of 2009, extention of the deadline for buyback of foreign currency convertible bonds (FCCBs) by the Reserve Bank to December 31, 2009, domestic consumer durable and capital goods output increasing by 2.5 per cent and 15.4 per cent, respectively, in January 2009, lower domestic inflation rate, strengthening of the rupee against the US dollar and net purchases by FIIs and mutual funds in domestic equity market. The BSE Sensex and the S&P CNX Nifty closed at 9709 and 3021 at end-March 2009 registering losses of 37.9 per cent and 36.2 per cent, respectively, over end-March 2008 (Chart 36). The BSE sensex closed at 11,023 on April 17, 2009.

V.61 According to the data released by the Securities and Exchange Board of India (SEBI), FIIs made net sales of Rs.48,249 crore (US $ 12.0 billion) in the Indian equity

Chart 36: Indian Stock Markets

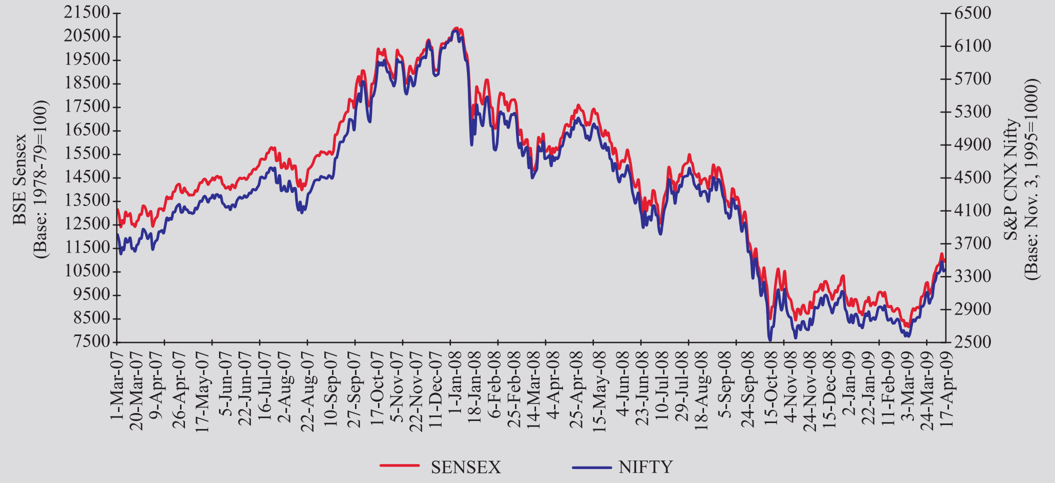
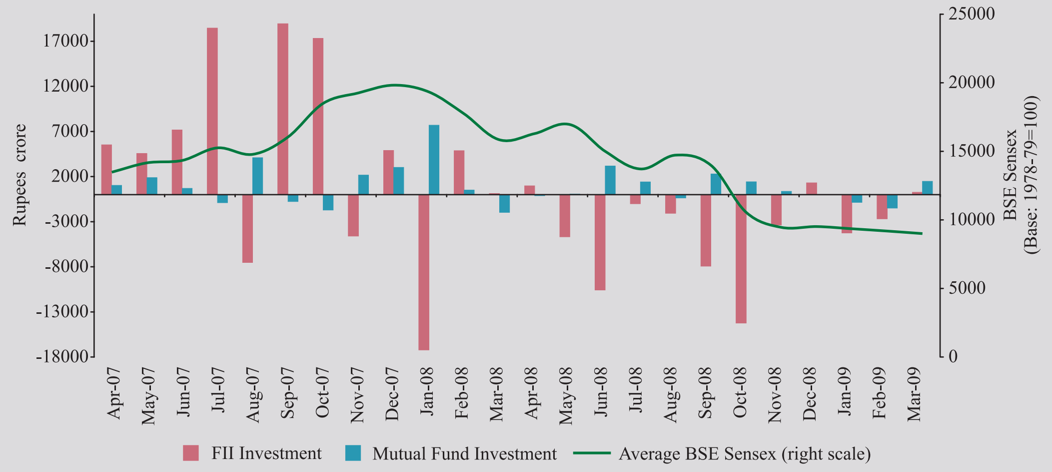


Chart 37: Net FIIs Investments and BSE Sensex



market during 2008-09 as against net purchases of Rs.52,574 crore (US $ 12.7 billion) during 2007-08 (Chart 37). Mutual funds, on the other hand, made net purchases of Rs.6,985 crore during 2008-09 as compared with net purchases of Rs.15,775 crore in the previous year.

V.62 The sectoral indices witnessed selling pressure across the board during 2008-09 *viz.*, metal, consumer durables, capital goods, banking, IT, oil and gas, auto, public sector undertakings, healthcare and fast moving consumer goods sector (Table 59).

Table 59: BSE Sectoral Stock Indices

(Base: 1978-79=100)

Sector	Variation (per cent)		
	End-March 2007	End-March 2008	End-March 2009
1	2	3	4
Fast Moving Consumer Goods	-21.4	31.7	-11.1
Public Sector Undertakings	-3.2	25.4	-29.6
Information Technology	21.6	-27.6	-35.6
Auto	-8.5	-7.1	-32.3
Oil and Gas	30.5	56.0	-29.6
Metal	-4.3	65.2	-58.7
Health Care	-5.4	5.4	-26.5
Bankex	24.2	18.0	-41.8
Capital Goods	11.1	54.4	-53.8
Consumer Durables	11.1	8.8	-58.1
BSE 500	**9.7**	**24.3**	**-42.8**
BSE Sensex	**15.9**	**19.7**	**-37.9**

Source : Bombay Stock Exchange Limited.

V.63 In line with the downward trend in stock prices, the price-earnings (P/E) ratios of the 30 scrips included in the BSE Sensex declined from 20.1 at end-March 2008 to 13.7 at end-March 2009. The market capitalisation of the BSE also declined by 44.3 per cent between end-March 2008 and end-February 2009. The cash segment turnover of BSE and NSE also declined by 30.2 per cent during April-February 2008-09 over the corresponding period of 2007-08. The turnover in the derivative segment of BSE and NSE also declined by 25.1 per cent during April-February 2008-09 over the corresponding period of the previous year. The volatility in the stock market, measured as coefficient of variation, however, increased during 2008-09 (Table 60).

Table 60: Stock Market Indicators

Indicator	BSE		NSE	
	2007-08	2008-09	2007-08	2008-09
1	2	3	4	5
1. BSE Sensex / S&P CNX Nifty				
(i) End-period	15,644	9,709	4,735	3,021
(ii) Average	16,569	12,366	4,897	3,731
2. Coefficient of Variation	13.7	24.2	14.4	23.2
3. Price-Earning Ratio (end-period)*	20.1	13.7	20.6	14.3
4. Price-Book Value Ratio (end-period)*	5.2	2.7	5.1	2.5
5. Yield* (per cent per annum) (end-period)	1.0	1.8	1.1	1.9
6. Listed Companies	4,887	4924 #	1,381	1425 #
7. Cash Segment Turnover (Rupees crore)	15,78,856	10,30,284 #	35,51,038	25,49,224 #
8. Derivative Segment Turnover (Rupees crore)	2,42,308	12,264 #	1,30,90,478	99,70,552 #
9. Market Capitalisation (Rupees crore) @	51,38,015	28,62,873 #	48,58,122	26,75,622 #
10. Market Capitalisation to GDP Ratio (per cent)	108.8	52.8	102.9	49.3

* : Based on the 30 scrips included in the BSE Sensex and the 50 scrips included in the S&P CNX Nifty.
@ : As at end-period.
# : As at end-February 2009.
Source : Bombay Stock Exchange Ltd. (BSE) and National Stock Exchange of India Ltd. (NSE).

Annex 2: Policy Response of the Reserve Bank since mid-September 2008

Item	Key Measures
1	2
Monetary Measures	• Cut in the repo rate under the LAF by a cumulative 400 basis points from 9.0 to 5.0 per cent since October 20, 2008. • Cut in the reverse repo rate by a cumulative 250 basis points from 6.0 to 3.5 per cent since December 8, 2008.
Rupee Liquidity/ Credit Delivery	• Cut in the CRR by a cumulative 400 basis points of NDTL from 9.0 per cent to 5.0 per cent since October 11, 2008. • Introduction of a special refinance facility under Section 17(3B) of the Reserve Bank of India Act, 1934 under which all SCBs (excluding RRBs) are provided refinance from the Reserve Bank equivalent to up to 1.0 per cent of each bank's NDTL as on October 24, 2008 at the LAF repo rate up to a maximum period of 90 days. Banks are encouraged to use this facility for the purpose of extending finance to micro and small enterprises. The facility will continue up to September 30, 2009. • Institution of a term repo facility for an amount of Rs.60,000 crore under the LAF to enable banks to ease liquidity stress faced by mutual funds, NBFCs and housing finance companies (HFCs) with associated SLR exemption of 1.5 per cent of NDTL. This facility is available up to September 30, 2009 (banks can avail of this facility either on an incremental or on a rollover basis within their entitlement of up to 1.5 per cent of NDTL). • Reduction in statutory liquidity ratio (SLR) by one percentage point from 25 to 24 per cent of NDTL with effect from the fortnight beginning November 8, 2008. • Introduction of a mechanism to buyback dated securities issued under the MSS so as to provide another avenue for injecting liquidity of a more durable nature into the system. • Extension of the period of entitlement of the first slab of pre-shipment and post-shipment rupee export credit, by 90 days each, with effect from November 15, 2008 and December 1, 2008, respectively. • Increase in the eligible limit of the ECR facility for scheduled banks (excluding RRBs) from 15 per cent to 50 per cent of the outstanding export credit eligible for refinance at the prevailing repo rate under the LAF. • Amounts allocated, in advance, from SCBs for contribution to the SIDBI and the NHB to the extent of Rs.2,000 crore and Rs.1,000 crore, respectively, against banks' estimated shortfall in priority sector lending in March 2009. • Reduction in the provisioning requirements for all types of standard assets (for residential housing loan beyond Rs.20 lakh, standard advances in the commercial real estate sector, personal loans including outstanding credit card receivables, loans and advances qualifying as capital market exposure and

(Contd...)

Annex 2: Policy Response of the Reserve Bank since mid-September 2008 *(Contd.)*	
Item	Key Measures
1	2
	non-deposit taking systemically important NBFCs) to a uniform level of 0.40 per cent except in case of direct advances to agricultural and SME sector which shall continue to attract provisioning of 0.25 per cent, as hitherto. • Downward revision of risk weights on banks' exposures to certain sectors, which had been increased counter-cyclically earlier. All unrated claims on corporates and claims secured by commercial real estate attract a uniform risk weight of 100 per cent as against the risk weight of 150 per cent prescribed earlier. Claims on rated as well as unrated non-deposit taking systemically important non-banking financial companies (NBFC-ND-SI) are uniformly risk weighted at 100 per cent. As regards the claims on asset financing companies (AFCs), there is no change in the risk weights, which continue to be governed by the credit rating of the AFCs, except the claims that attract a risk weight of 150 per cent under the new capital adequacy framework, reduced to a level of 100 per cent. • In order to provide liquidity support to housing, export and MSE sectors, the Reserve Bank provided a refinance facility of Rs.4,000 crore to the NHB, Rs. 5,000 crore to the EXIM Bank and Rs. 7,000 core to the SIDBI up to March 2010. • For more effective liquidity management, the Reserve Bank widened the scope of OMO by including purchases of government securities through an auction-based mechanism in addition to operations through NDS-OM.
Foreign Exchange Liquidity	• To continue selling foreign exchange (US dollars) through agent banks to augment supply in the domestic foreign exchange market or intervene directly to meet any demand-supply gaps. • To institute special market operations to meet the foreign exchange requirements of public sector oil marketing companies against oil bonds. • The ceiling rate on export credit in foreign currency increased to LIBOR plus 350 basis points subject to banks not levying any other charges. • Authorised Dealer (AD) category - I banks allowed to borrow funds from their head office, overseas branches and correspondents and overdrafts in nostro accounts up to a limit of 50 per cent of their unimpaired Tier 1 capital as at the close of the previous quarter or US$ 10 million, whichever was higher, as against the earlier limit of 25 per cent. • As a temporary measure, HFCs registered with the NHB were allowed to raise short-term foreign currency borrowings under the approval route, subject to compliance with prudential norms laid down by the NHB.

(Contd...)

Annex 2: Policy Response of the Reserve Bank since mid-September 2008 *(Concld.)*	
Item	Key Measures
1	2
	• A forex swap facility with tenure up to three months to Indian public and private sector banks having overseas operations in order to provide them flexibility in managing their short term funding requirements at their overseas offices. The facility is available up to March 31, 2010. • Cumulative increase in the interest rate ceilings on FCNR (B) and NR(E)RA term deposits by 175 basis points each since September 16, 2008. • Proposals from Indian companies to prematurely buyback their FCCBs to be considered under the approval or automatic route, depending on the extent of discount of the FCCBs and the source of funds, subject to compliance with certain stipulated conditions. (The buyback should be financed by the company's foreign currency resources held in India or abroad and/or out of fresh external commercial borrowing (ECB) raised in conformity with the current norms for ECBs). Extension of FCCBs also to be permitted at the current all-in-cost for the relative maturity.
ECB Norms	• The all-in-cost ceiling for ECBs of average maturity period of three to five years and of maturity period over five years was enhanced to 300 basis points above LIBOR and 500 basis points above LIBOR, respectively. The all-in-cost ceiling for trade credit less than three years was enhanced to 6-month LIBOR plus 200 basis points. • ECBs up to US$ 500 million per borrower per financial year were permitted for rupee/foreign currency expenditure for permissible end-uses under the automatic route. • The definition of infrastructure sector for availing ECB was expanded to include mining, exploration and refinery sectors. Payment for obtaining license/permit for 3G spectrum by telecom companies was classified as eligible end-use for the purpose of ECB. • The requirement of minimum average maturity period of 7 years for ECB of more than US$ 100 million for rupee capital expenditure by the borrowers in infrastructure sector was dispensed with. • Borrowers were granted the flexibility to keep their ECB proceeds offshore or keep it with the overseas branches/subsidiaries of Indian banks abroad or to remit these funds to India for credit to their rupee accounts with AD category-I banks in India, pending utilisation for permissible end-uses. • NBFCs exclusively involved in financing of the infrastructure sector were permitted to avail of ECBs under the approval route from multilateral/regional financial institutions and Government-owned development financial institutions for on-lending to the borrowers in the infrastructure sector, subject to compliance with certain conditions.